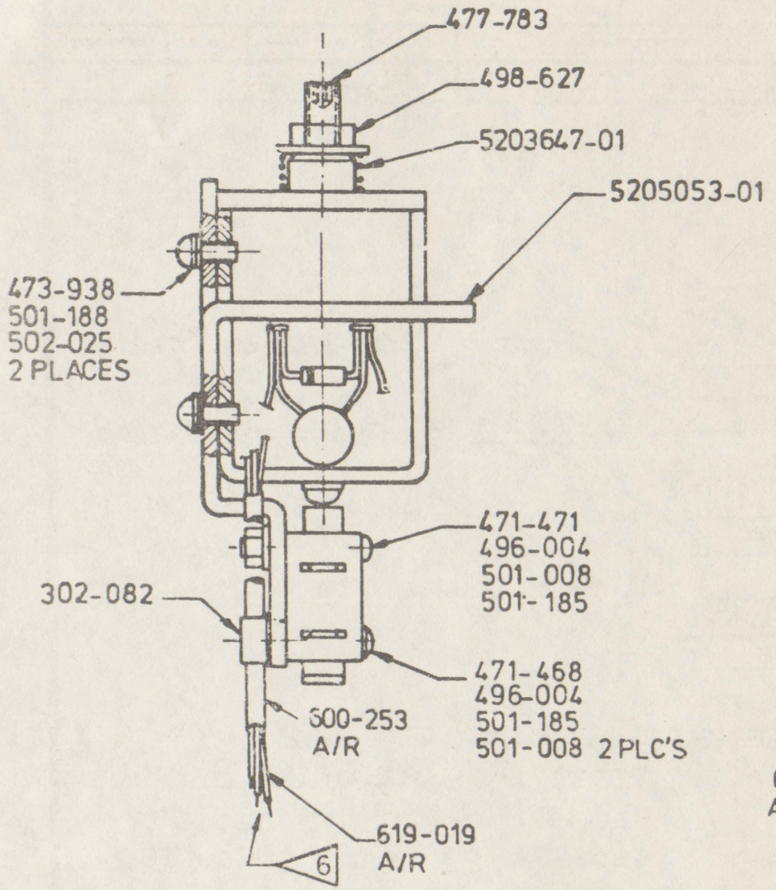
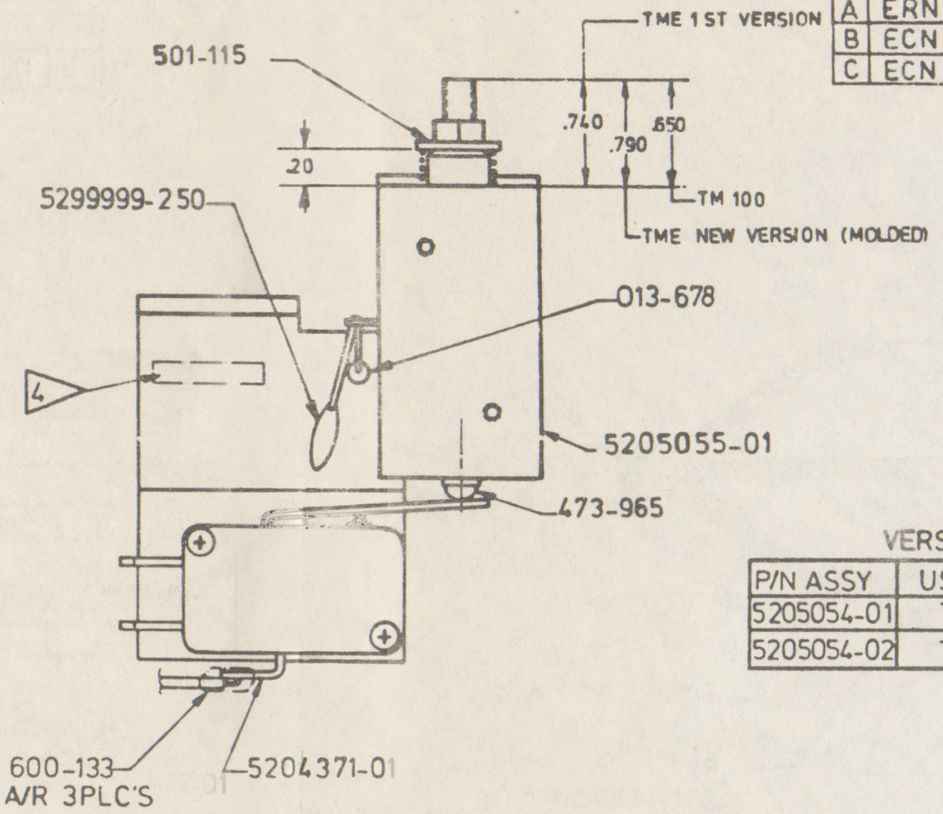
CAIET SCHEME AMPEX ITM 100

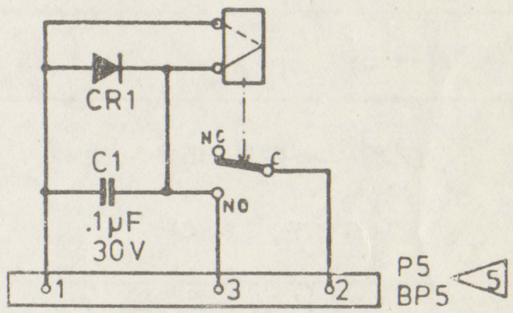
uz intern

1986

A	ERN N 2514				
B	ECN N 2682-2				
C	ECN N 2767-2				







SCHEMATIC

VERSION TABLE

P/N ASSY	USED ON	CONNEC BODY	PIN
5205054-01	TM 100	166-059 (P5)	187-030
5205054-02	TME	167-450 (BP5)	167-671

6 CONNECTOR PINS AND BODIES NOT SHOWN FOR CLARITY.

5 MARK ASSY NO PER VERSION TABLE

4 MARK ASSY NO PER AMPEX STD BD 1-1

3. HEAVY LINE ON DIODE INDICATES CATHODE

2. ASSEMBLE PER AMPEX STD HC2-2

1. ASSY NO TO BE AS PER VERSION TABLE

NOTES

DO NOT SCALE DRAWING
UNLESS OTHERWISE SPECIFIED

AMPEX ... HYDELLEN BELGIUM

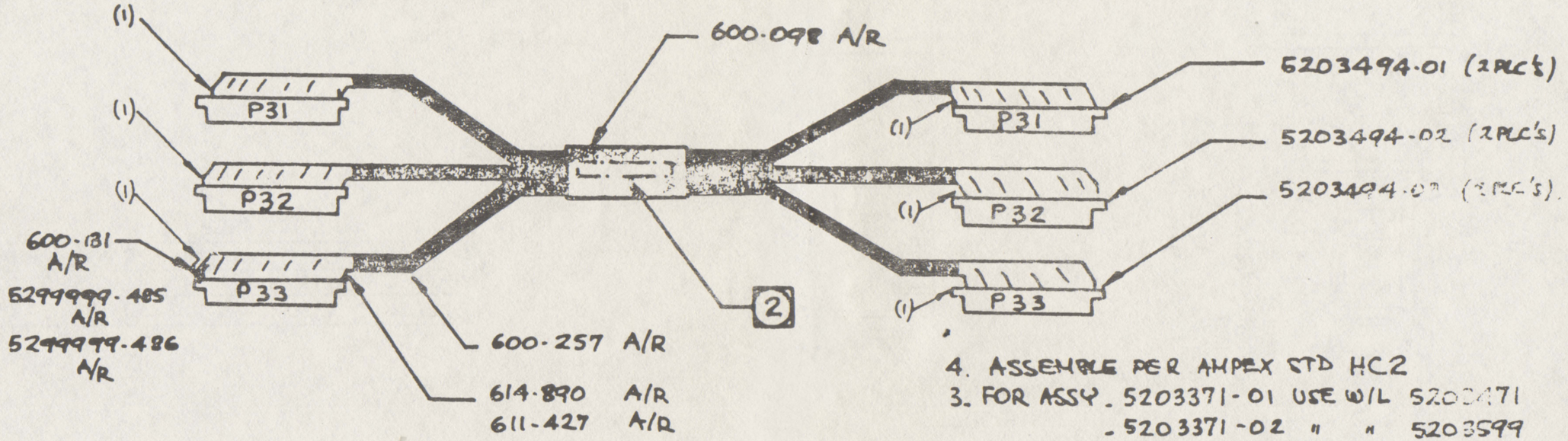
FILE PROTECT ASSY

5205054 | TM100-TME

C 5205052 C

NONE | SHEET 1 OF 1

REVISIONS					
ISSUE	DESCRIPTION	DATE	DRAFTSMAN	DATE	APPROVAL
D	N2388	21/4/81	H. Hare		



4. ASSEMBLE PER AMPEX STD HC2
3. FOR ASSY. 5203371-01 USE W/L 5203471
-5203371-02 " " 5203599
-5203371-03 " " 5204755

(2) MARK P/N DASH & ISSUE LETTER AS PER AMPEX SPEC 3124500

NOTES: 1. FOR B/M SEE 5203371

5203300	TM100
FAL	
NEXT ASSY.	1ST USED ON
APPLICATION	

DO NOT SCALE DRAWING

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES, TOLERANCES
DECIMALS XX ± XXX ± ANGLES ±
BREAK ALL SHARP EDGES APPROX .010 C'BORE AND SPOTFACE CORNER RADII APPROX .010 ROUGHNESS OF ALL MACHINED SURFACES ---- PER MIL-STD-10

MATERIAL

FINISH

DWG NO 5203371

THE INFORMATION HEREON IS THE PROPERTY OF AMPEX COMPUTER PRODUCTS DIVISION NO REPRODUCTION OR UNAUTHORIZED USE IN PART OR IN WHOLE SHALL BE MADE WITHOUT WRITTEN CONSENT OF AMPEX CORPORATION

PROJ ENGR		
ENGR		
CHKR	P.J. [illegible]	21/4/81
DFTSMN	[illegible]	21/4/81

MODEL

TM X STACK PROF
VIDEO AUDIO
INSTRU CONS

AMPEX S.A. NIVELLES BELGIUM

TITLE
CABLE DAISY CHAIN
SET OF CABLE

BM X NO BM
ON DWG SEPARATE X
REF DWG

SIZE A | DWG NO 5203371 | ISSUE A

SCALE — | SHEET 1 OF 1

QAF 1793/78

A	ERN N 1302	72-[illegible]	R BE		
B	ECN N 1742	9-7-73	R BE		
C	ECN N 1769	29-[illegible]-73	R BE		
D	ECN N 1938	[illegible]	R BE		
E	ECN N 2106	[illegible]	R BE		
F	ECN N 2455	[illegible]	R BE		
G	ECN N 2468	[illegible]	R BE		
H	ECN N 2601/3	21-9-75	R BE		

132-287 — 132-286

132-288 (4)

SECTION 'A-A'

6 PLACES

5203386-01

5203386-02

ASSY NO.	PART A	PART B
5203380-01	5203386-01	NONE
5203380-02	NONE	5203386-02

VERSION TABLE (2)

(5) REAR SIDE

5203343-01
471-062
501-186
502-082
} 2 REQ'D
3 PLACES

(5) IDENTIFY PER AMPEX SPEC 3124500, PARA 3
RUBBER STAMP PERMISSIBLE
(4) SWAGE POST P/N 132-288 PRIOR INSTALLATION OF SPRING P/N 132-286 AND SHELL 132-287
3. FOR REF., WIRE LIST NO. IS 5203385
(2) PART NO. TO BE AS PER VERSION TABLE.
1. FOR SCHEMATIC SEE 5203381

NOTES

AMPEX

OPERATOR CONTROL PANEL ASSEMBLY

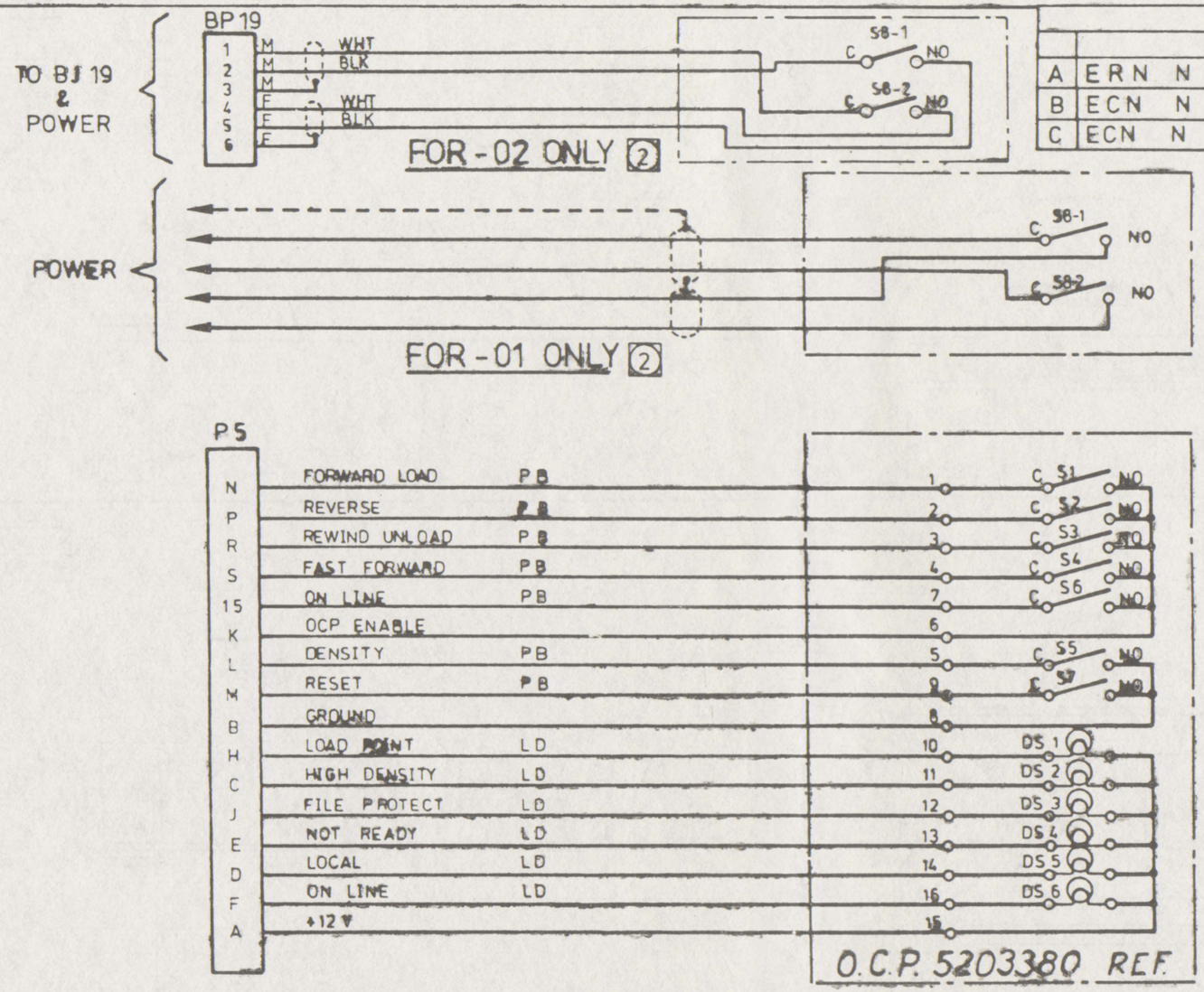
5203382

B

SCALE NONE

SHT 1 OF 1

DO NOT SCALE DRAWING



REVISIONS					
A	ERN N 1302	19 JUIN 73			
B	ECN N 1938	4 DEC 74			
C	ECN N 2455	[illegible]			

3. S8 TO BE 4620199 01
S5 TO BE 5299999-332
S1,2,3,4,6,7 ARE 5299999-330.

(2) P/N TO BE 5203380-XX.

1. FOR REF DWG SEE 5203382.

NOTES:

DO NOT SCALE DRAWING

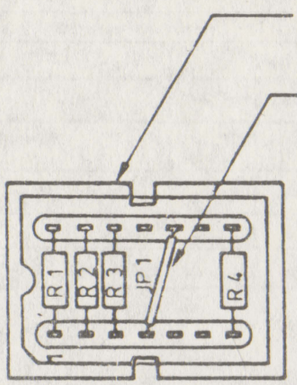
5203380	TM 100

LEMINEUR	
QUINET	
MARRONE	
MAEGERMAN	

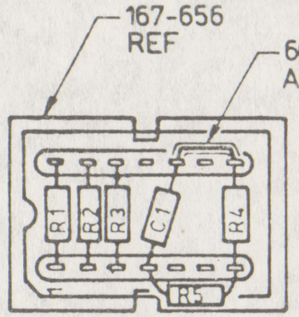
AMPEX S.A. NIVELLES BELGIUM

OPERATOR CONTROL PANEL SCHEMATIC

B	5203381	C
NONE		1 OF 1



FOR ALL DASHES
EXCEPT -05.



FOR -05 ONLY.

REVISIONS					
ISS	DESCRIPTION	DATE	DRAFTSMAN	DATE	APPROVAL
R	ECN N 2731-5	[illegible]	H G	[illegible]	[illegible]

VERSION TABLE (3)

	PART NUMBER	FUNC IPS	COMPONENTS PART A	PART B	PT. C	PART D	PART E	PART F
ICEM MOTOR	5203541-02	45	049-617	049-868	614-762	049-529	—	—
	-12	37,5	-868	-603			—	—
	-22	25	-870	-662			—	—
	-32	12,5	-874	-874			—	—
	-42	18,75	-872	-873		049-529	—	—
	-03	45	-617	-618		049-613	—	—
	-13	37,5	-868	-869			—	—
	-23	25	-870	-871			—	—
	-43	18,75	-872	-873	614-762		—	—
PE/NRZ EC MOTOR	-04	45	-617	-618	—		—	—
	-14	37,5	-868	-869	—		—	—
	-24	25	-870	-871	—		—	—
	-44	18,75	-872	-873	—		—	—
	-33	12,5	-874	-721	614-762		—	—
	-34	12,5	-874	-721	—		—	—
	-54	50	-866	-868	—		—	—
	5203541-05	45	049-617	049-868	—	049-613	035-883	5299997-432

P/N	REF. DES	
PART A	R2	(3)
PART B	R1, R3	(3)
PART C	JP1	(3)
PART D	R4	(3)
PART E	C1	(3)
PART F	R5	(3)

NOTES:

(6) AXIAL LEAD WIRE FROM C1 TO BE INSULATED.
5. IDENTIFY PER AMPEX STD BD1-1.
4. FOR SCHEMATIC SEE 5203542.
(3) P/N TO BE AS PER VERSION TABLE.
2. COMPONENT DESIGNATIONS ARE FOR REF. ONLY.
1. ASSEMBLE PER AMPEX STD HC2-2.

5203541	TM 100

DO NOT SCALE DRAWING
UNLESS OTHERWISE SPECIFIED

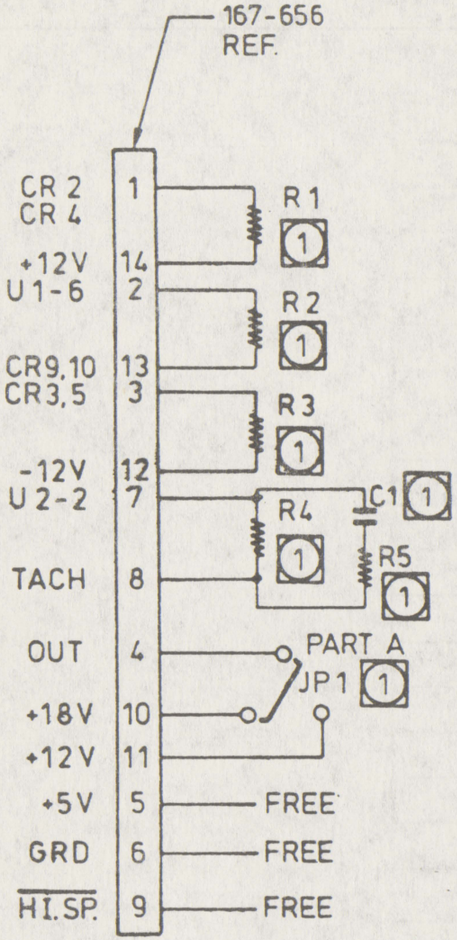
5203543

GREGOIRE A. 7-X-74

AMPEX S.A. NIVELLES BELGIUM

PCBA OPTION
SERVO SINGLE SPEED

B	5203543	R
NONE	1 OF 1	



VERSION TABLE (1)

	PART NUMBER	FUNCTION	COMP. DESIGNATION					
			R2	R1,R3	PT. A	R4	C1	R5
EC MOTOR / CEM MOTOR	5203541-02	45 IPS	33K	43K	JP1	5.1K	—	—
	-12	37,5 IPS	43K	51K			—	—
	-22	25 IPS	75K	82K			—	—
	-32	12,5 IPS	180K	180K			—	—
	-42	18,75 IPS	110K	130K		5.1K	—	—
EC MOTOR / PE/NRZ	-03	45 IPS	33K	47K		15K	—	—
	-13	37,5 IPS	43K	56K			—	—
	-23	25 IPS	75K	91K			—	—
	-43	18,75 IPS	110K	130K	JP1		—	—
	-04	45 IPS	33K	47K	—		—	—
	-14	37,5 IPS	43K	56K	—		—	—
	-24	25 IPS	75K	91K	—		—	—
	-44	18,75 IPS	110K	130K	—		—	—
	-33	12,5 IPS	180K	200K	JP1	15K	—	—
	-34	12,5 IPS	180K	200K	—	15K	—	—
	-54	50 IPS	30K	43K	—	15K	—	—
	5203541-05	45 IPS	33K	43K	—	15K	.068µF	4.3K

NOTES:

3. ALL CAPACITOR VALUES ARE IN MICROFARADS, 50V, 5%.
2. ALL RESISTOR VALUES ARE IN OHMS, 1/8W, ±5%
(1) SEE VERSION TABLE.

REVISIONS					
INS.-I	DESCRIPTION	DATE	DRAFTSMAN	DATE	APPROVAL
J	ECN N 2058	9-X-74	H.G.		
K	ECN N 2061	11-X-74	H.G.		
L	ECN N 2186	7 VII 75			
M	ECN N 2455	14 DEC 77	H.G.		
N	ECN N 2487	4-IV-78	M.DE		
P	ECN N 2731-4	20 OCT 78	H.G.		

DO NOT SCALE DRAWING
UNLESS OTHERWISE SPECIFIED

5203541	TM 100

5203542

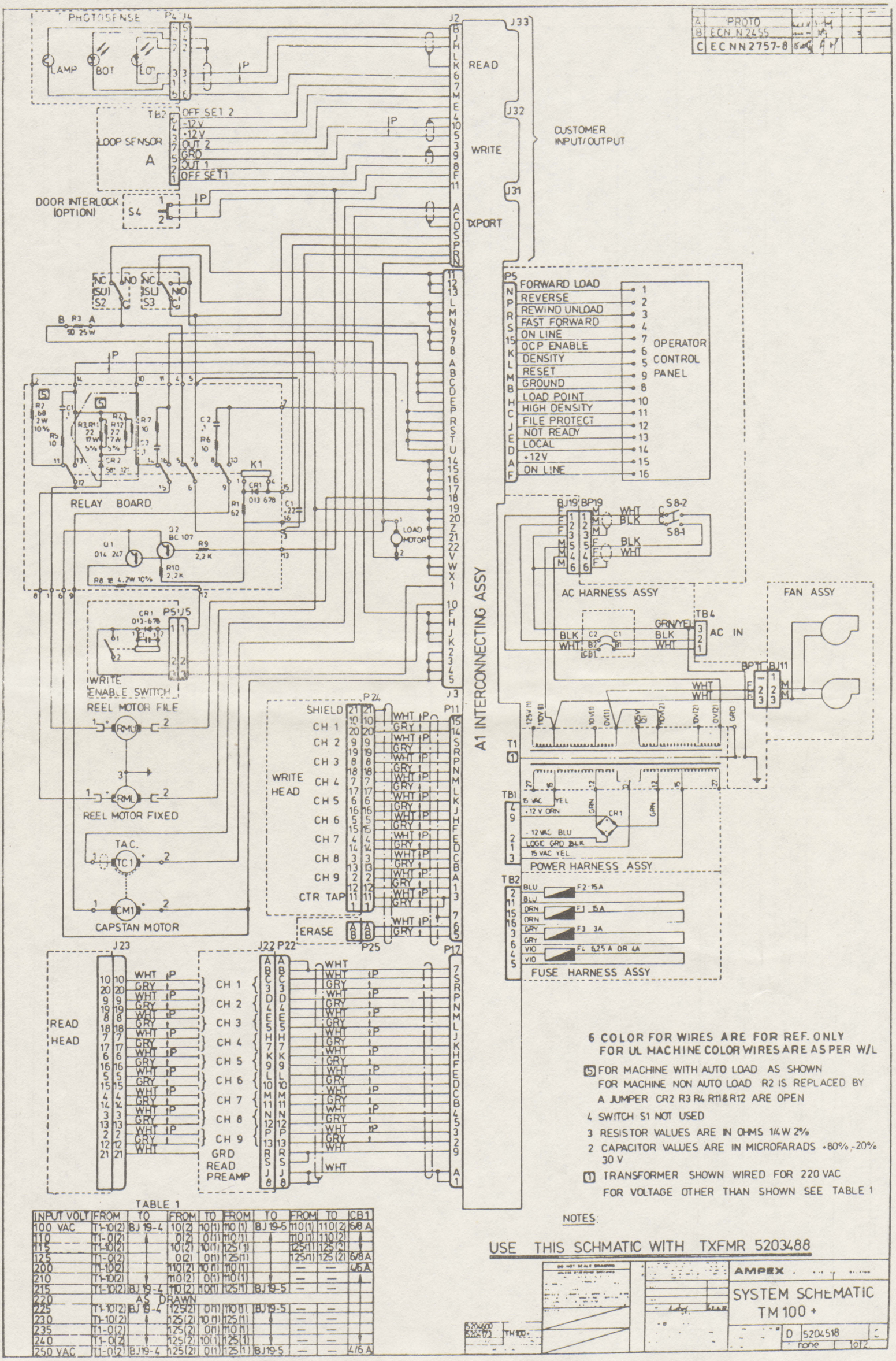
P.J. Jans — 8 X 74
GREGOIRE.A — 9-X-74

AMPEX S.A. NIVELLES BELGIUM

SCHEMATIC OPTION
SERVO SINGLE SPEED

B | 5203542 | P

SCALE — | SHEET 1 OF 1



A	PROTO	
B	ECN N2455	
C	ECN N2757-8	

6 COLOR FOR WIRES ARE FOR REF. ONLY
FOR UL MACHINE COLOR WIRES ARE AS PER W/L

5 FOR MACHINE WITH AUTO LOAD AS SHOWN
FOR MACHINE NON AUTO LOAD R2 IS REPLACED BY A JUMPER CR2 R3 R4 R11 & R12 ARE OPEN

4 SWITCH S1 NOT USED

3 RESISTOR VALUES ARE IN OHMS 1/4 W 2%

2 CAPACITOR VALUES ARE IN MICROFARADS +80% -20% 30 V

1 TRANSFORMER SHOWN WIRED FOR 220 VAC
FOR VOLTAGE OTHER THAN SHOWN SEE TABLE 1

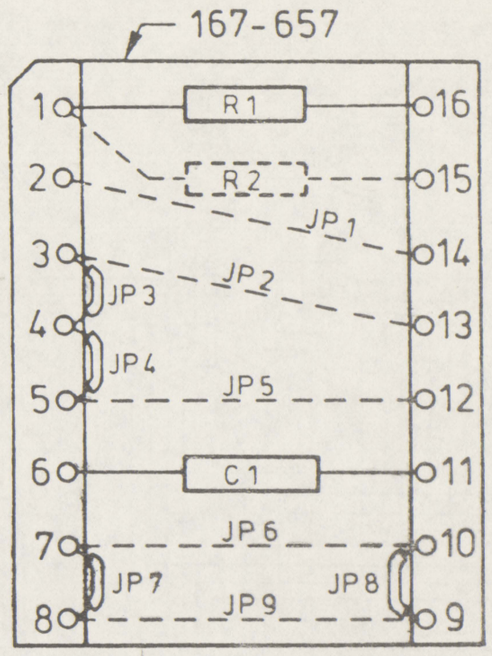
TABLE 1

INPUT VOLT	FROM	TO	FROM	TO	FROM	TO	FROM	TO	CB1
100 VAC	T1-10(2)	BJ 19-4	10(2)	110(1)	110 (1)	BJ 19-5	110(1)	110(2)	6/8 A
110	T1- 0(2)		0(2)	0(1)	110(1)		110 (1)	110(2)	
115	T1-10(2)		10(2)	10(1)	125(1)		125(1)	125(2)	
125	T1- 0(2)		0(2)	0(1)	125(1)		125(1)	125(2)	6/8 A
200	T1-10(2)		110(2)	110 (1)	110 (1)		—	—	4/6 A
210	T1-10(2)		110(2)	0(1)	110(1)		—	—	
215	T1-10(2)	BJ 19-4	110(2)	110(1)	125(1)	BJ 19-5	—	—	
220	AS DRAWN								
225	T1-10(2)	BJ 19-4	125(2)	0(1)	110(1)	BJ 19-5	—	—	
230	T1-10(2)		125(2)	10(1)	125(1)		—	—	
235	T1- 0(2)		125(2)	0(1)	110(1)		—	—	
240	T1- 0(2)		125(2)	10(1)	125(1)		—	—	
250 VAC	T1- 0(2)	BJ 19-4	125(2)	0(1)	125(1)	BJ 19-5	—	—	4/6 A

NOTES:

USE THIS SCHMATIC WITH TXFMR 5203488

AMPEX	
SYSTEM SCHEMATIC TM 100+	
D 5204518	C
none	1012



VERSION TABLE

PART NUMBER	JUMPER JP									R1	R2	C1
	1	2	3	4	5	6	7	8	9			
5203597-01			X	X			X	X		X	JP	X
-02		X			X		X	X		X	JP	X
-07	X		X		X	X			X	X	JP	X
-09			X		X		X	X		X	-	X
-10	X	X			X	X			X	X	JP	X
-11					X		X	X		X	JP	X

REVISIONS					
ISSUE	DESCRIPTION	DATE	DRAFTSMAN	DATE	APPROVAL
B	ECN N 2487	4 APR 78	M.B.E.		
C	ECN N 2719-2	10 OCT 78			

CONVENIENCE TABLE

FUNCTION		JUMPER JP								
		1	2	3	4	5	6	7	8	9
RUN/STOP FWD/REV OR FWD/STOP REV/STOP		-					-	X	X	-
		X					X	-	-	X
OFF-LINE INPUT	YES				-	X				
	NO				X	-				
FAST FWD (DDS) INPUT	YES		X	-						
	NO		-	X						

COMPONENT TABLE

PART NO.	REF. DESIGNATION	QTY
615-004	JP1 THRU JP9	A/R
049-613	R1	1
615-004	R2	A/R
034-240	C1	1

NOTES:

5. COMPONENT P/N ARE FOR REF. ONLY.
4. C1 CAPACITOR VALUE TO BE 220pF.5%.500V.
3. R1 RESISTOR VALUE TO BE 15KOHMS,1/8W,5%.
2. IDENTIFY PER AMPEX STD BD1-1.
1. PART NO. TO BE AS PER VERSION TABLE.

5203597	TM 100

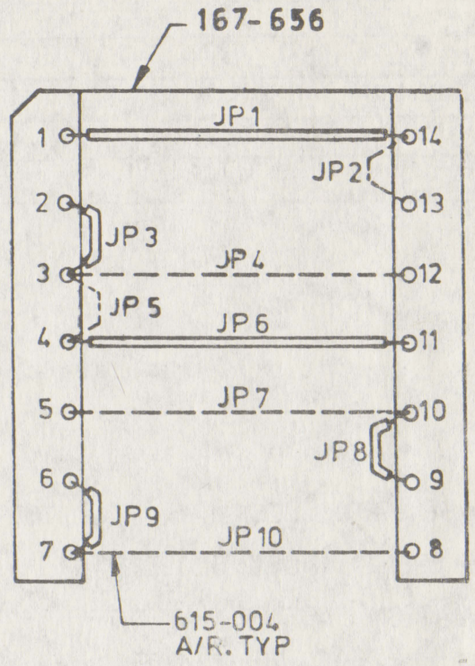
DO NOT SCALE DRAWING

5203598

AMPEX SA REVELLES BELGIUM

TITLE: JUMPER SOCKET ASSY 16 PINS

SIZE	DWG NO	SCALE
B	5203598	C
NEXT	NONE	SHEET 1 OF 1



VERSION TABLE

PART NUMBER	JUMPER JP									
	1	2	3	4	5	6	7	8	9	10
5203595-01	X		X			X		X	X	
-02	X					X		X	X	
-03	X		X	X		X		X	X	
-06	X			X		X	X		X	
-07	X			X	X		X			X
-08	X				X		X			X
-09	X		X			X		X		X
5203595-05	X					X	X			X
5203595-04	X			X		X	X			X

CONVENIENCE TABLE

FUNCTION			JUMPER JP									
			1	2	3	4	5	6	7	8	9	10
STATUS,WRITE ENABLE STATUS,FILE PROTECT	OR										X	– X
STATUS,HI DENS STATUS,LO DENS	OR								X –	– X		
READY STATUS		YES			–							
		NO			X							
SINGLE DENSITY		YES				X						
		NO				–						
FIRST OCP LAMP BOT ON LINE AND SELECT	OR		X –	– X								
BOT STATUS IN REVERSE	INDUSTRY	YES					X	–				
	TM7	NO					–	X				

NOTES

1 PART NO. TO BE AS PER VERSION TABLE

2 IDENTIFY PER AMPEX STD BD1-1

REVISIONS

ISS.	DESCRIPTION	DATE	DRAFTSMAN	DATE	APPROVAL
A	ERN N 1988	15-X-74			
		/ -			
C	ECN N 2455	14 DEC 77	KG		
D	ECN N 2487	4-IV-78	M.BE		

DO NOT SCALE DRAWING
UNLESS OTHERWISE SPECIFIED

5203595	TM 100

5203596

M. B. de Coster 15-X-74

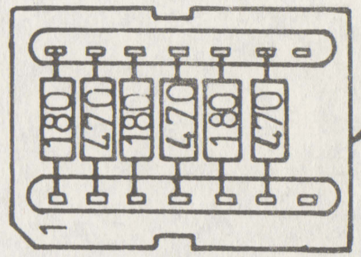
AMPEX S.A. NIVELLES BELGIUM

JUMPER SOCKET ASSY
14 PINS

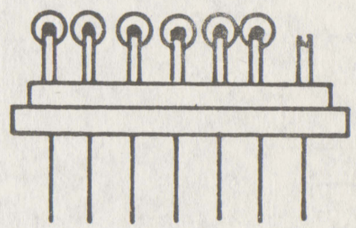
B 5203596

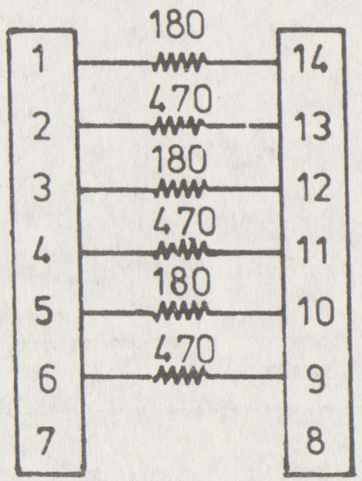
NONE 1 OF 1

REVISIONS					
ISSUE	DESCRIPTION	DATE	DRAFTSMAN	DATE	APPROVAL
A	ERN N 1304				
B	ECN N 1945	1-III-74	M DE		
D	ECN N 2487	24-10-75	M. DE	27 NOV 75	-TE
E	ECN N 2759	16 NOV 78		16 NOV 78	C. HAMLIN



167-656





(7) MAY BE PURCHASE FROM "BECKMAN RESISTOR NETWORK" TYPE 898-1 MODEL 5203575-01. (VENDOR: "REGULATION MESURE" AVENUE R.VANDENDRIESSCHE,73 1150 BRUXELLES)

6 ALL RESISTOR VALUES ARE IN OHMS, 5%, 1/8 W.

5. P/N FOR RESISTOR OF 470 OHMS IS 041-624

4. P/N FOR RESISTOR OF 180 OHMS IS 049-758

3. P/N TO BE 5203575-01

2. MARK PART NUMBER PER BD1-1

1. ASSEMBLE PER AMPEX STD.

NOTES:

DO NOT SCALE DRAWING

UNLESS OTHERWISE SPECIFIED

DIMENSIONS ARE IN INCHES

DECIMALS TOLERANCES ANGLES

BREAK ALL SHARP EDGES APPROX .005 BORE AND SPOTFACE CORNER RAD. APPROX .010

ROUGHNESS OF ALL MACHINED SURFACES PER MIL STD ✓

MATERIAL (7)

5203600	TM 100
NEXT ASSY	USED ON
APPLICATION	

PROPRIETARY NOTICE

DRWN J.P.D.	17 APR 75
CHK'D C. Gallegos	29 APR 75
ENGR	
APPVD	

MODEL

AMPEX S.A. NIVELLES BELGIUM

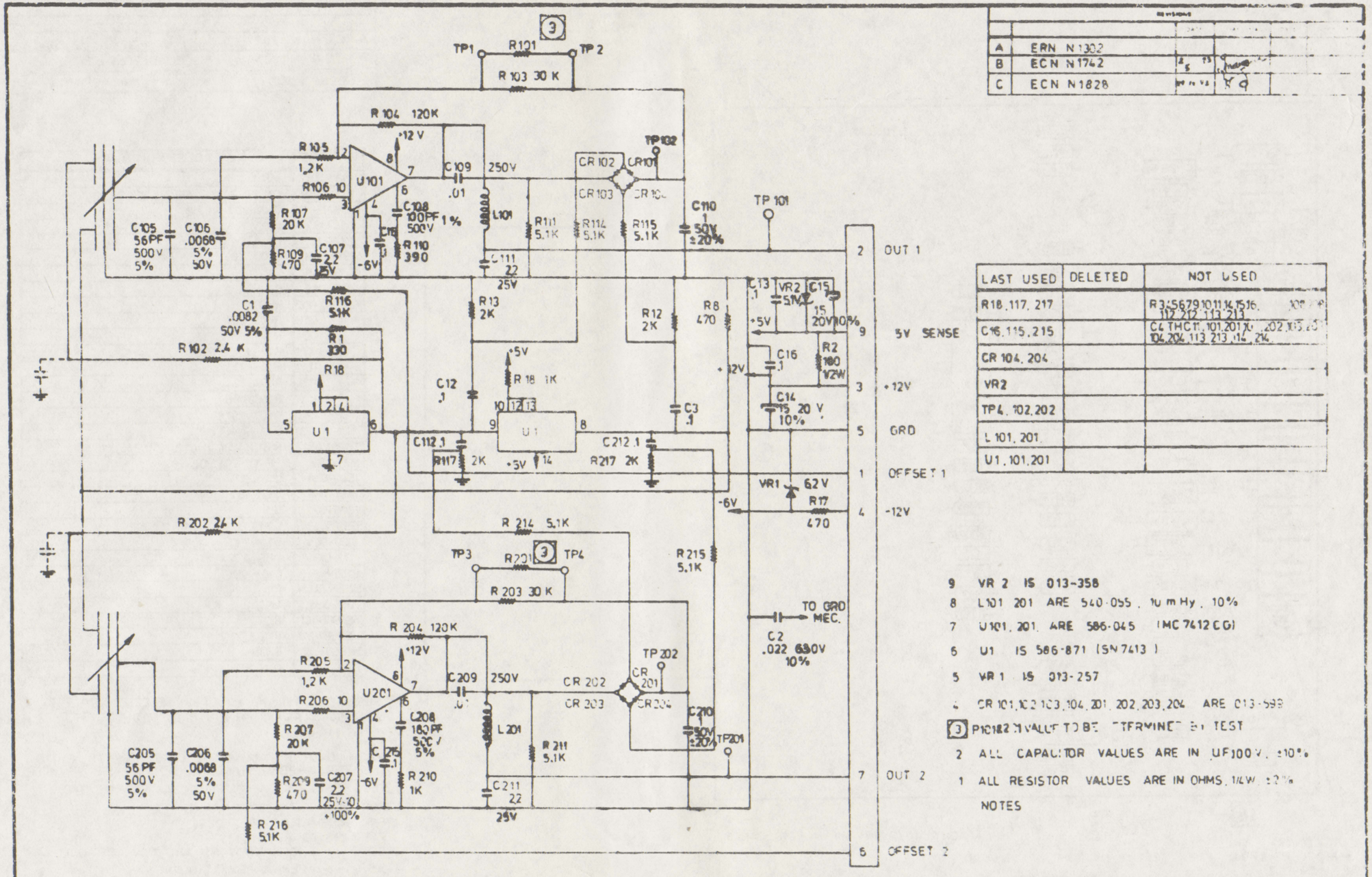
TITLE

OPTION

TERMINATION RESISTOR

SIZE A	DWG NO 5203575	ISSUE E
SCALE	SHEET 1 OF 1	

A	ERN N1302	
B	ECN N1742	
C	ECN N1828	



LAST USED	DELETED	NOT USED
R18, 117, 217		R3,5,6,7,9,10,11,14,15,16, 101, 112, 212, 113, 213
C16, 115, 215		C4 THCT1, 101, 201, 102, 202, 103, 104, 204, 113, 213, 114, 214
CR 104, 204		
VR2		
TP4, 102, 202		
L 101, 201		
U1, 101, 201		

9 VR 2 IS 013-358

8 L101 201 ARE 540-055, 10 m Hy, 10%

7 U101, 201, ARE 586-045 (MC 7412 CG)

6 U1 IS 586-871 (SN 7413)

5 VR 1 IS 013-257

4 CR 101, 102 103, 104, 201, 202, 203, 204 ARE 013-598

[3] P102 & 202 VALUE TO BE DETERMINED BY TEST

2 ALL CAPACITOR VALUES ARE IN UF 100 V, ±10%

1 ALL RESISTOR VALUES ARE IN OHMS, 1/4W, ±2%

NOTES

DO NOT SCALE DRAWING
UNLESS OTHERWISE SPECIFIED

5203330 TM100

5203331

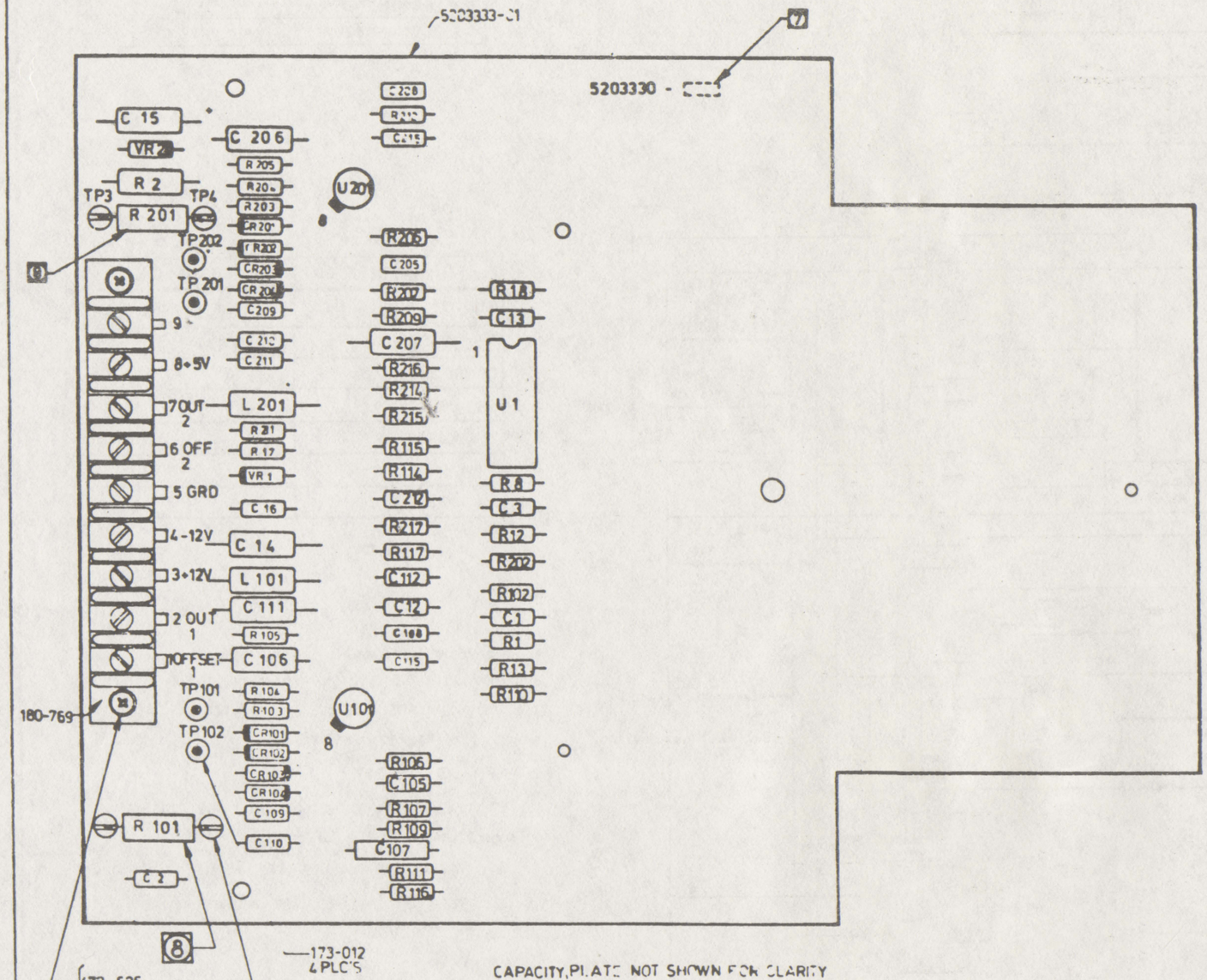
LEMIEUX
ARYS
MARRONE
MATHLES

AMPEX

SCHEMATIC LOOP SEN
ELECTRONICS

C 5203331

REVISIONS					
		DATE	DRAFTSMAN	DATE	APPROVAL
A	ERN N 1302				
B	ECN N 1828				
C	ECN N 2840-2				



PART NO	REF DESIGNATION
013-257	VR 1
013-599	CR 101, 201, 102, 202, 103, 203, 104, 204
5299999-387	C107, 207, 111, 211
034-182	C105, 205
034-347	C208
5299999-362	C109, 209
035-846	C1
037-985	C14, 15
5299997-102	R8, 210
-303	R103, 203
-331	R1
-471	R8, 17, 109, 209
-122	R105, 205
-124	R104, 204
-100	R106, 206
-203	R107, 207
-202	R12, 13, 117, 217
5299997-512	R111, 211, 114, 214, 115, 215, 116, 216
173-012	TP 101, 201, 102, 202
540-055	L101, 201
586-046	U101, 201
586-871	U 1
5299999-347	C3, 12, 13, 16, 115, 215, 112, 212
030-945	C110, 210
173-013	TP 1, 2, 3, 4
055-547	C106, 206
5299999-414	C*
013-358	VR 2
5299998-181	R 2
5299997-242	R 102, 202
5299997-391	R 110
034-222	C 108

8 RESISTORS R101, 201 WILL BE SELECTED BY TEST AND PICKED OUT OF KIT P/N 5203338-01 DELIVERED WITH THIS PCBA

7 MARK DASH NO AND ISSUE LETTER WITH WHITE INK PER AMPEX STANDARD BD1-1

6 PLUS SIGN ON CAPACITOR INDICATES POSITIVE

5-FOR BM SEE 5203330
4-FOR SCHEMATIC SEE 5203331
3-PART NO TO BE 5203330-01
2-COMPONENT DESIGNATIONS ARE FOR REF ONLY
1-ASSEMBLE PER AMPEX STANDARDS HC 2-2

NOTES:

DO NOT SCALE DRAWING
UNLESS OTHERWISE SPECIFIED

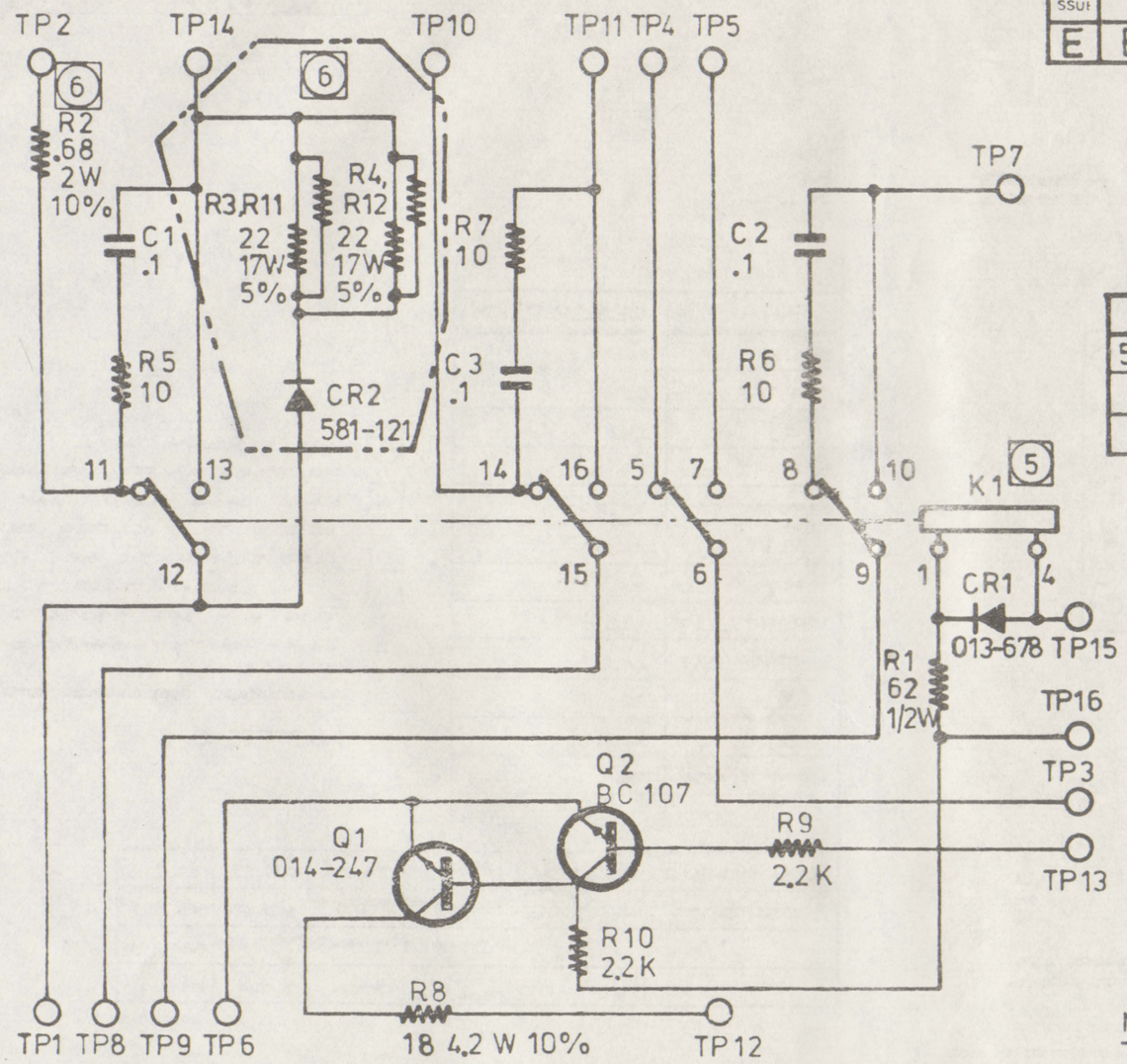
	LEMIEUR	
	QUINET	5 VI 73
	MARRONE	
	MAEGERMAN	

AMPEX

PCBA LOOP SENSOR ELECTRONICS

5203330	TM 100	C	5203332 C
		SCALE NONE	SHEET 1 OF 2

REVISIONS					
SSUE	DESCRIPTION	DATE	DRAFTSMAN	DATE	APPROVAL
E	ECN N 2149	30-III-75			



VERSION TABLE (6)

ASSY NO.	R2	R3,R4	R11,R12	CR2
5203670-04	USED	USED	OPEN	USED
-05	USED	USED	USED	USED
-06	JUMP	OPEN	OPEN	OPEN

(6) ASSY NO. TO BE AS PER VERSION TABLE.
(5) K1 IS 020-572 (REF. ONLY).
4. Q2 IS 5299999-257.
3. ALL CAPACITOR VALUES ARE IN µF, 100V, ±10%.
2. ALL RESISTOR VALUES ARE IN OHMS, 1/4W, ±2%.
1. FOR ASSEMBLY SEE 5203670.

NOTES: UNLESS OTHERWISE SPECIFIED.

LAST USED	DELETED
R12	
C3	
CR2	
Q2	
K1	

5203670	TM 100
NEXT ASSY	1 ST USED ON
APPLICATION	

DO NOT SCALE DRAWING
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES: DECIMALS xx ± xxx ± ANGLES
BREAK ALL SHARP EDGES APPROX .010 C BORE AND SPOTFACE CORNER RADII APPROX .010
ROUGHNESS OF ALL MACHINED SURFACES — PER MIL STD-10 ✓
MATERIAL
FINISH

DWG NO 5203671

THE INFORMATION HEREON IS THE PROPERTY OF AMPEX COMPUTER PRODUCTS DIVISION. NO REPRODUCTION OR UNAUTHORIZED USE IN PART OR IN WHOLE SHALL BE MADE WITHOUT WRITTEN CONSENT OF AMPEX CORPORATION

PROJ ENGR		
ENGR		
CHKR		
DFTSMN GREGOIRE	28 III 74	

MODEL
TM ■ STACK □ □
VIDEO □ AUDIO □ PROF □
INSTRU □ □ CONS □

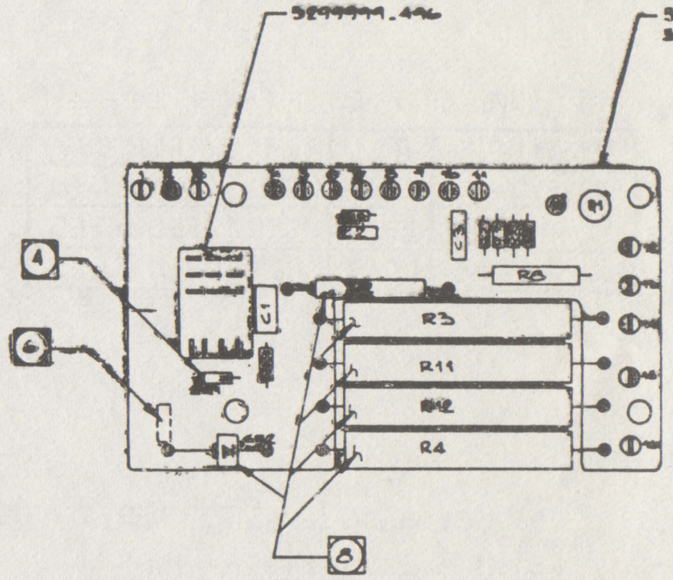
AMPEX S.A NIVELLES BELGIUM

TITLE
SCHEMATIC RELAY BOARD

BM □ NO BM ■
ON DWG □ SEPARATE □
REF DWG □ □

SIZE A | DWG NO 5203671 | E
SCALE NONE | SHEET 1 OF 1

F	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

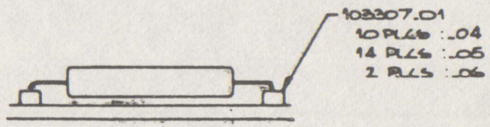


PIN	DESCRIPTION
013.678	CR1
014.247	Q1
8	CR2
5299997.100	R5.6.7
5299997.282	R9.R10
8	R11.12
5299998.620	R1
5299999.257	Q2
5299999.347	C1.2.3
8	R2
8	R3.4
5299999.481	R5

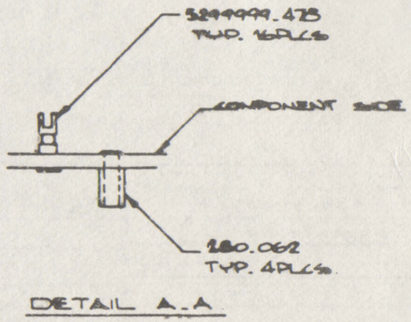
8 SEE VERSION TABLE
7 PIN TO BE AS PER VERSION TABLE
6. MARK DASH NUMBER AND ISSUE LETTER WITH WHITE INK PER ESD 1.1
5. FOR SCHEMATIC SEE 5203671.
4 HEAVY LINE ON DIODE INDICATES CATHODE
3. FOR BOM SEE 5203670
2. COMPONENT DESIGNATIONS ARE FOR REF. ONLY.
1 ASSEMBLE PER AMPEX STD MCE.2

NOTES:

TYP. TRANSISTOR INSTALLATION



TYP. RESISTOR MOUNTING



DETAIL A-A

ASSY NUMBER	FUNCTION	R2	R3.R4	R11.12	CR2
5203670.04	MERCURE	5299999.479	5299999.480	NONE	581.121
.05	AUTO	5299999.479	5299999.480	5299999.480	581.121
.06	NON AUTO	JUMP 614.762	OPEN	OPEN	OPEN

DO NOT SCALE DRAWING
UNLESS OTHERWISE SPECIFIED

AMPEX

PCBA. RELAY BD

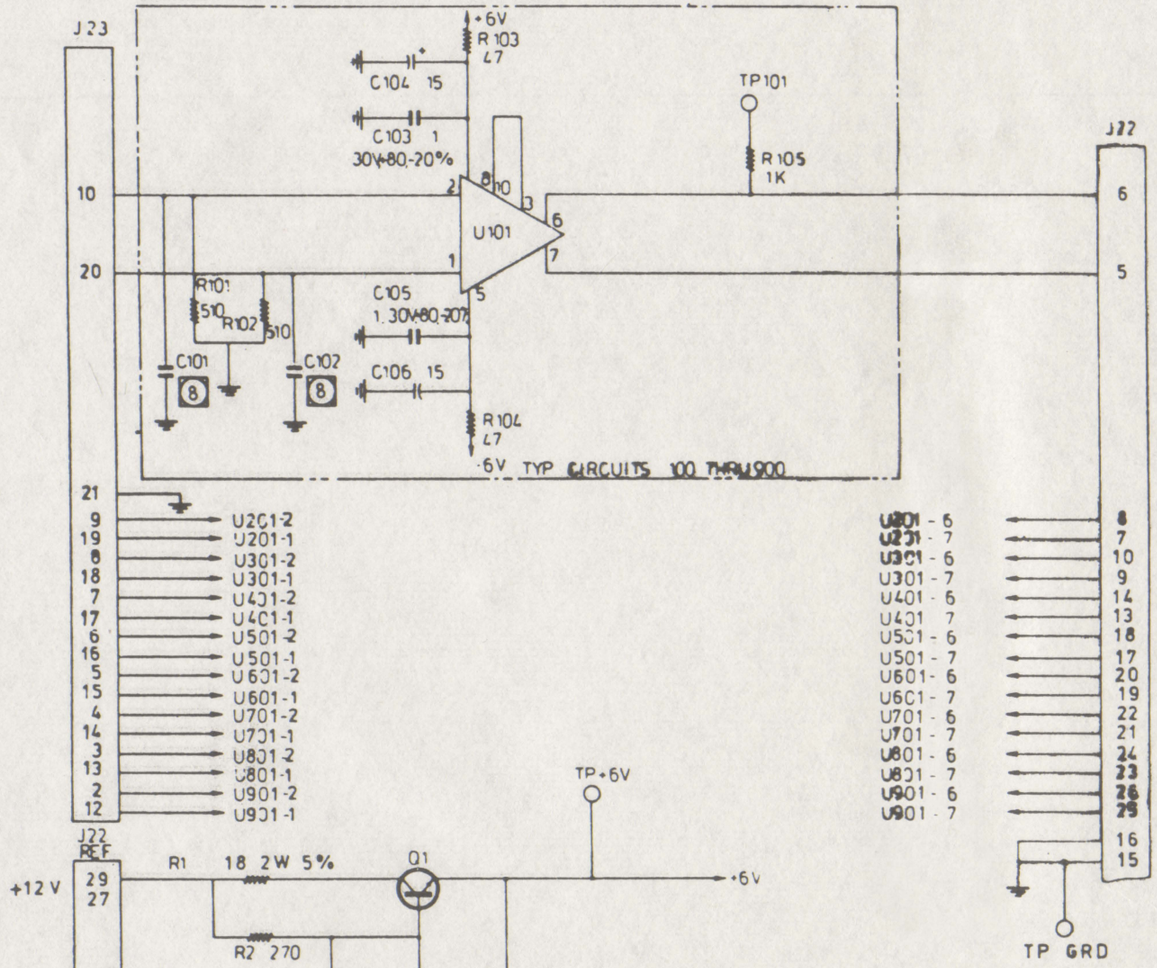
REF. DWG.

5203670 | TM 100

C | 5203672 | F

1 of 1

REVISIONS					
S	DESCRIPTION	DATE	DRAFTSMAN	DATE	APPROVAL
A	ERN N 1302				
B	ECN N 1742				
C	ECN N 1806	[illegible]	[illegible]		
D	ECN N 1898	[illegible]	[illegible]		
E	ECN N 2527	[illegible]	[illegible]		



VERSION TABLE (1)

FUNCTION	ASSY NO.
TM 100 & TME LO. SPEED	5203325 - 01
TME HI. SPEED	5203325 - 02

LAST USED	DELETED	NOT USED
TP 101 TH 901		
C 106 TH 906		
U 901		
R 105 TH 905		
R 4		
VR 2		
C 4		
Q 2		
TP GRD. TP-6V. TP+6V		

(8) OPEN FOR -01
P/N 034-177 FOR -02.

7. ALL IC ARE 586-289 (µA733)
6. Q2 IS 014-364
5. Q1 IS 014-247
4. ALL DIODES TO BE 013-224
3. ALL CAPACITOR VALUES ARE IN MICROFARADS. 20V. ±10%
2. ALL RESISTOR VALUES ARE IN OHMS . 1/4W. ±2%
(1) FOR ASSEMBLY SEE VERSION TABLE.

NOTES

PREAMPLIFICATEUR

DO NOT SCALE DRAWING
UNLESS OTHERWISE SPECIFIED

5203325	TM 100
NEXT ASSY	[illegible]
APPLICATION	

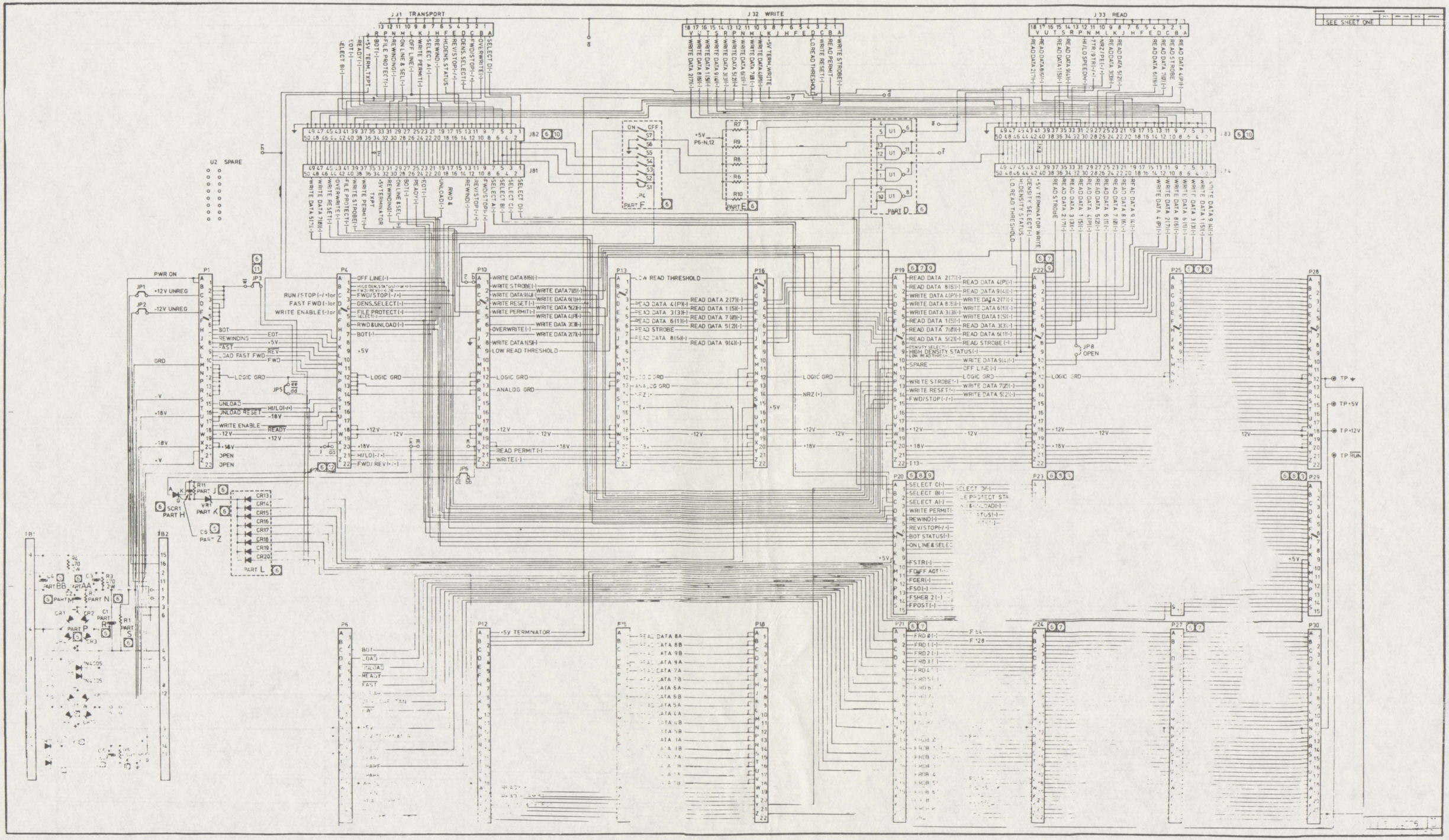
5203326

DES.	LEMINEUR
DRAWN	DEBAISIEUX
CHK.	MARRONE
APPD.	MATHUES

AMPEX S.A. NIVELLES BELGIUM

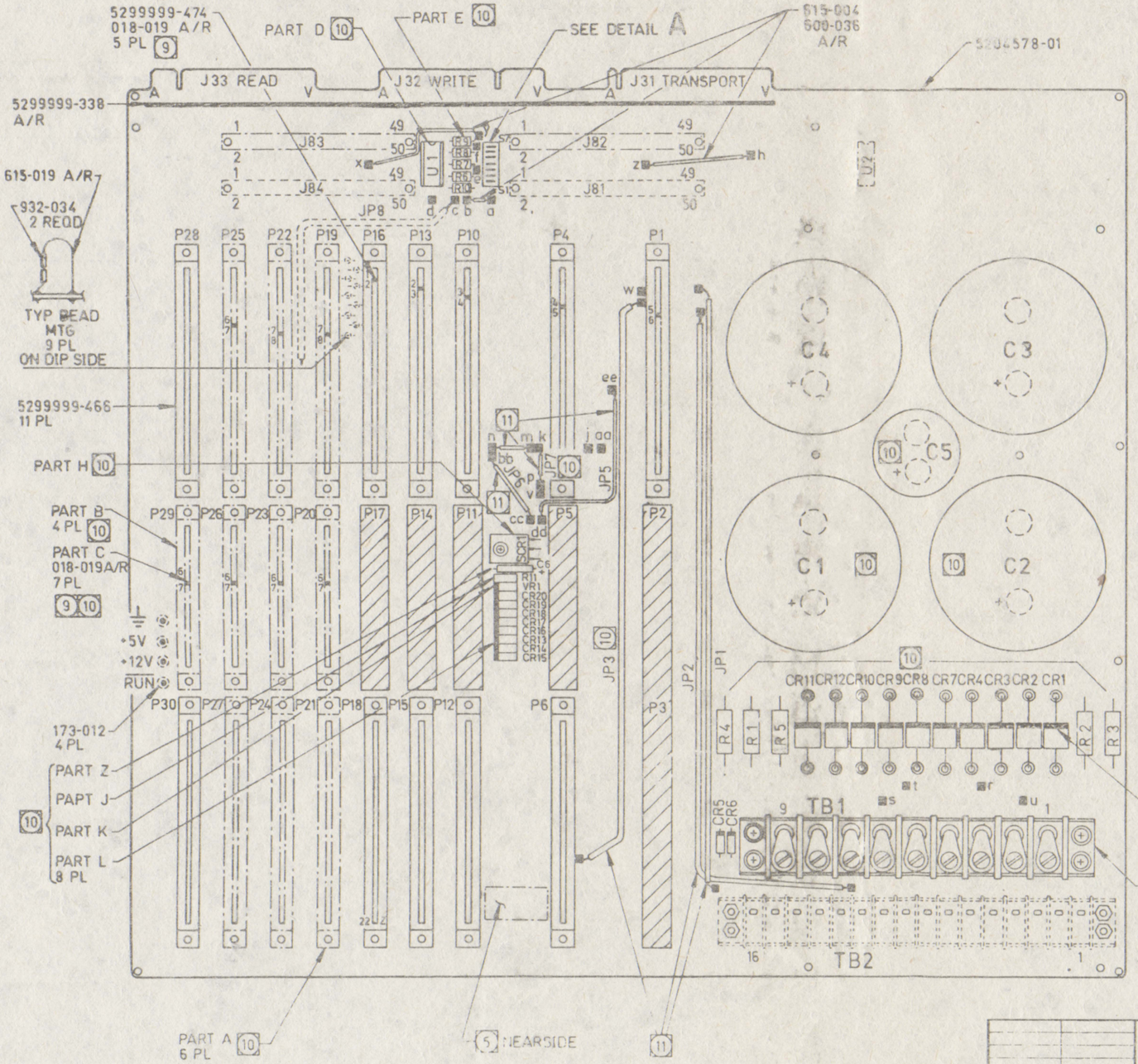
SCHEMATIC
READ PREAMPLIFIER

C	5203325	E
DATE NONE		SHEET OF 1


J31 TRANSPORT
J32 WRITE
J33 READ
SEE SHEET ONE
U2 SPARE
PWR ON
+12V UNREG
-12V UNREG
RUN/STOP(-/+)or
FAST FWD(-)or
WRITE ENABLE(-)or
LOGIC GRD
ANALOG GRD
+5V TERMINATOR
LOW READ THRESHOLD
READ PERMIT(-)
WRITE(-)
HI/LO(-/+)
FWD/REV(+/-)
READY
OPEN
TP +5V
TP +12V
TP RUN

5204182

REVISIONS					
LTR	ZONE	DESCRIPTION	SIGNATURE AND DATE DFTG	CHK	ENGRG
C		ECN N2708-9			
		REDRAWN NO CHANGE			



[13] 5204180-05,-06,-07,-08 WHEN TFO 5204746-01 IS USED.

[12] 5204180-01,-02,-03,-04 WHEN TFO 5203498-01 IS USED.

[11] ALL JUMPERS TO BE 615-006 & 600-187 UNLESS OTHERWISE SPECIFIED.

[10] INSTALL PARTS PER VERSION TABLE ON SH 2.

[9] INSTALL KEY AS SHOWN.

[8] SCREW & WASHER ARE SUPPLIED WITH CAPACITOR.

7. PLUS SIGN ON CAPACITOR INDICATES POSITIVE.

[6] HEAVY LINE ON DIODE INDICATES CATHODE.

[5] MARK DASH NO. AND ISSUE LETTER WITH WHITE INK PER BD1-1.

4. FOR SCHEMATIC SEE 5204576.

[3] FOR ASSY NO. SEE VERSION TABLE.

2. COMPONENT DESIGNATION ARE FOR REF ONLY.

1. ASSEMBLE PER AMPEX STD HC2-2.

NOTES: UNLESS OTHERWISE SPECIFIED

PARTSLIST FUND de SERTAR

NOTICE

THIS DRAWING SHALL NOT BE DUPLICATED, USED FOR ANY PURPOSE OTHER THAN THAT FOR WHICH PROVIDED OR DISCLOSED IN WHOLE OR IN PART WITHOUT THE WRITTEN CONSENT OF AMPEX CORPORATION PROVIDED THAT IF THIS DRAWING

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES AND INCLUDE CHEMICALLY APPLIED OR PLATED FINISHES.
TOL ± | 2 PL | 3 PL | ANG ±
REMOVE BURR AND SHARP EDGES UNLESS OTHERWISE NOTED
MATERIAL AS

SIGNATURE | DATE
DRAWN BY
CHK BY
DFTG APVD

AMPEX MEMORY PRODUCTS DIVISION

PCBA REF DWG
INTERCONNECTING
TM100+, MOTHER BD ASSY

D	09150	5 2 0 4 1 8 2

5204182

5203816

REVISIONS				
LTR	ZONE	DESCRIPTION	SIGNATURE AND DATE DFTR	CHK	ENGRG
M		SEE SH 1	—	—	—

■ DENOTES INTERNAL OUTPUT SIGNAL
○ DENOTES INTERNAL INPUT SIGNAL

FROM CAPSTAN SERVO
+9.5V FOR 12 ONLY
+18V UNREG
+5V
BOT
EOT
READY
NOT READY IND
RESET PB
FROM OCP
FWD/LOAD PB
REV PB
REW/UNL PB
FST FWD PB
J4
J5
J6 REF
TP1
TP2
TP4
TP5
TP +8V
+12V UNREG
REMOTE ENABLE 1 (U21-9) SH 5
REMOTE OFF LINE (U28-1) SH 5
RESET 1 (CR8-C)
RESET 2
STOP DELAY (U18-6) SH 5
REMOTE UNLOAD (U25-9,10) SH 5
REMOTE RWD (U25-10) SH 5
REMOTE FST FWD (JP1, U2-5) SH 5
FROM OCP J5 REF
ON LINE PB
LOAD (U27-8,U4-M) SH 5
RESET 3 (U20-1)
L1 (U4-11)
ON LINE (U23-5, U12-3, U7-11) SH 5
LOAD (U27-8, U16-2, J6-4) SH 5
ON LINE IND
LOCAL IND
RUN (U16-12, 18) SH 5
J6 (TO WRITE BD)
TO U30 3 REF
FROM U4 9 REF
DETAIL A
FWD (TO CAPSTAN SERVO)
REV (SOC2-11) SH 5
FWD/REV (+/-) (TO READ/WRITE BOARDS)
REV (TO CAPSTAN SERVO)
FAST (TO CAPSTAN SERVO)
REWINDING (TO CAPSTAN SERVO)
+5V TERMINATOR XPT (TO INTERFACE)
FWD DELAY
RESET 2
END BOT
BOT F/F (JP12)
RWDG (U3-9, U19-9) SH 5
RWDG (U24-10) SH 5
CLEAR
FAST
TRANSPORT

SIZE	CODE IDENT NO	
D	09150	5203816
SCALE NONE		SHEET 5 OF 5

5203816

REVISIONS					
LTR	ZONE	DESCRIPTION	SIGNATURE AND DATE		
			DFTG	CHK	ENGRG
M		SEE SH 1			

* DENOTES INTERNAL OUTPUT SIGNAL.
● DENOTES INTERNAL INPUT SIGNAL.

REMOTE ENABLE 1 (SOC2-13) SH 6
RWDG (J6-6) SH 6
(U17-2,3) LPFF (U11-6) SH 6
+5V
(J6-Z) RUN (U13-10) SH 6
REMOTE ENABLE 1
REMOTE ENABLE 3
TP8
R71 +5V
JP11
J6 REF
Y ONLINE & SELECT (-)
22 REM ENAB 2 TO READ/WRITE BOARDS
LAMP DRIVER L.D.*
Q101
R101
R102
C101
TYPICAL CKT 100 TO 600
TO J5-H (LD1) SH 6
J5-C (LD2)
J5-J (LD3)
J5-E (LD4) SH 6
J5-D (LD5) SH 6
J5-F (LD6) SH 6
J5 (TO WRITE BD)
W READY
JP1 +5V R9
REMOTE FST FWD (U3-5) SH 6
FAST (U15-9) SH 6
FAST (J4-L) SH 6
JP4
J4 REF
4 UNIT ONLINE AND SELECT (-)
3 READY (-)
EOT (-)
H REWINDING (-)
7 BOT (-)
E WRITE ENABLE (-) OR FILE PROTECT (-)
B HI/LW DENSITY STATUS (-/+ OR +/-)
21 HI/LO (TO READ/WRITE BOARDS)
5 UNLOAD (TO CAPSTAN SERVO)
15 UNLOAD RESET (TO CAPSTAN SERVO)
11 LOAD (TO CAPSTAN SERVO)
TO INTERFACE
FROM INTERFACE
J4
SELECT (-) 5
FST FWD (-) OR DENSITY SELECT (-)
REWIND (-) 1
FWD/REV (-/+) OR FWD/STOP (-/+) C
RUN/STOP (-/+) OR REV/STOP (-/+) 2
OFF LINE (-) A
REWIND & UNLOAD (-) 6
WRITE ENABLE (FROM CAPSTAN SERVO) U
+12V V
GND 12 N 13 P R 14
-18V UNREG T 16
CR7 R87
C44 R88 SOC4-11,12
C21 SOC3-9,10
C39 SOC3-1,2
C42 OPEN SOC4-9,10
C40 OPEN SOC3-11,12
C20 SOC4-1,2
C38
REMOTE DENSITY SELECT
R55 5V
C18 OPEN C19 OPEN
B2 (U15-4) SH 6
C43 OPEN
C25 OPEN
C22 OPEN
R30 +5V
R32 +5V
REMOTE OFF LINE (U20-2) SH 6
REMOTE RWD (U3-2) SH 6
REMOTE UNLOAD (U8-12) SH 6
C36 OPEN
(TO WRITE BD) J6
WRITE ENABLE V
R18
CR2
R17
U5
R13 +5V
SOC2
ONLINE
ONLINE
U12
JP16
JP17
U20
R70
JP10
EOT (J4-8) SH 6
TP1
TP3
STOP DELAY (U7-5) SH 6
STOP DELAY (U22-5) SH 6
Q3
RWDG (J4-K) SH 6
R56
BOT (U1-6) SH 6
REV (21-4,5) SH 6
R52 R53 R66 R69 R65 R68 R54
U23 U24
SOC2
JP5 REF (TO OCP)
C HI DENSITY INDICATOR
J FILE PROT IND
K OCP ENABLE
L.D.2
L.D.3
FROM OCP DENSITY SWITCH
OPEN JP9
JP8
R58 JP7
R12
U5
J6 (TO WRITE BD)
21 HI/LO INPUT (SPARE)
4 LOAD
5 UNLOAD
JP12 SH 6
N1 (U8-13) SH 6
B3 (U15-4) SH 6
C46
C45
UNLOAD
L1 (U4-11) SH 6
U2-9 U19-3 SH 6
SH 6 (J6-3) BOT
SH 5 (U4-5, U12-2) RESET 1
CR10 C (SH 5)
UN-LOAD F/F U27
LOAD F/F U27
Q10 Q9 Q8 Q5 Q6 Q4 Q11 Q7
CR6 CR4
R81 R63 R79 R77 R49 R59 R80 R82 R78 R76 R47 R74 R21 R75 R46 R41 R44 R40 R61 R45 R43 R83 R42 R33
C32 C31 C26 C30 C29 C27 C28
VR2 VR3 VR1 SCR1 SCR2
+18V -18V
TP+12V TP GRD GRD TP-12V -12V
FROM SOC3&4-4 -6 -7 -13
ONLINE (U7-1) SH 6
RESET 1 (U4-8) SH 6
LPFF (U11-5) SH 6
R72 TP7
U16 U7 U18 U19 U20 U21 U24 U25 U26
SOC1 SOC2 SOC3 SOC4

SIZE	DRAWING NO	5203316
D	09150	
SCALE NONE		SHEET

REVISIONS					
LTR	ZONE	DESCRIPTION	SIGNATURE AND DATE DFTG	CHK	ENGRG
U		SEE SHEET ONE			

615 - 019
600 - 237
A/R

5203155 - 01

5203818 - 01

J6 J5 J4

JP14 JP15 JP13 JP12

R83 SCR2 SCR1 Q11 Q10 U28 R54

R82 R81 R80 R79 VR3 R78 R77 R76 VR2 R75 R74

Q9 Q8 Q7 Q6 Q5 Q4

R63 R62 R61 R60

C46 R73 U27 C45 R87 C38 C14 C43 C42 U26 C41 C40 C39 Q3 SOC4 C38 C35 U25 JP11 R71 C36 SOC3 C37 R69 R70 U24 R68 R64 JP10 R66 R67 R65 U23 C34 C33 R86 R85 R49 R51

CR7 R72 R58 TP7 JP9 JP8 JP7 JP5 C22 JP6 JP4 JP2 JP1 C21 R55 C20 R32 R31 R30 C19 C18 R48 R50 R52 R53 C15 C16 R28 R29 R54 R24 R25 R26 R27 R23 R22 R21 R20 R19 R18 R17 R16 R15 R14 R13 R12 R11 R10 R9 R8 R7 R6 R5 R4 R3 R2 R1

C32 C31 C30 C29 C28 C27 C26 R59 U22 C25 U21 C24 U20 U19 U18 U17 U16 U15 U14 U13 U12 U11 U10 U9 U8 U7 U6 U5 U4 U3 U2 U1

R67 R66 R65 R64 R63 R62 R61 R60 C30 R39 R38 R37 R36 R35 R34 R33 C17 C7 C2 C1 C12 C14 C5 C4 C3 C10 C9 C8 C13 C11 C47 R46

Q101 Q301 Q401 Q601 Q501 Q201 R301 R101 R401 R501 R201 C101 C301 C401 C601 C501 C201 R302 R102 R602 R402 R502 R202 C302 C102 C602 C402 C502 C202 R21 R18 R17 R16 R15 R14 R13 R12 R11 R10 R9 R8 R7 R6 R5 R4 R3 R2 R1

TP-12V TP GRD TP12V TP5V TP6 TP4 TP3 TP2 TP1

DETAIL MTG FOR C11

595 - 590 3 PL

TYP 012 TYP 1/2 PL

HEAT SINK 5203155 - 01 REF
614 - 762
NUT 492 - 008 2 REQD
LOCK WASHER 502 - 002 2 REQD
FLAT WASHER 501 - 195 2 REQD
SILICON GREASE 087 - 388
TSTR
MICA INSULATOR 014 - 292
INSULATING BUSH 014 - 292
FLAT WASHER
PCB 5203818 - 01 REF
SCREW 471 - 065 2 REQD
501 - 195 2 REQD

TYPICAL TSTR MOUNTING TO 3 3 PLACES

DETAIL MTG FOR -15 & -16 ONLY
COMPONENTS SIDE VIEW
INSTALL THIS CAPACITOR ON DIP SIDE AS SHOWN
ON COMP SIDE
CUT TRACK ON DIP SIDE

INSTALL MICA INSULATOR 503-308
014 - 292
471 - 065
501 - 195 2 REQD
502 - 002
492 - 008
2 PLACES

TYPICAL THYRISTOR MOUNTING [5]

TRANSPORT

SIZE	FSCM IDENT NO	
D	09150	5203817

J1

WRITE ENABLE
+12V UNREG
+12V
FWD
-18V
-26V
REVERSE
ZERO REEL
ZERO REEL
-12V
ZERO CAPSTAN TACH. L.W.
FAST
REWINDING
+5V
P.S. FAIL TACH. HI.
-12V UNREG
LOAD F/F READY
UNLOAD F/F RESET UNLOAD
+18V
GRD
GRD
EOT
BOT

J2

BOT
EOT/BOT GRD
EOT
LOWER REEL SERVO IN
UPPER REEL SERVO IN
OFFSET UP
OFFSET LOW

J3

CAPSTAN MOTOR GRD
LOAD MOTOR GRD
WRITE ENABLE GRD
LOWER MOTOR FEEDBACK
UPPER MOTOR FEEDBACK
LOWER MOTOR
UPPER MOTOR

J3 REF

CAPSTAN MOTOR
WRITE ENABLE

J2 REF

TACH. LOW
DOOR INTERLOCK
TACH. HI.
GRD
-12V
DOOR INTERLOCK TACH SHIELD
+12V
+5V EOT/BOT LAMP
RELAY
S-L
RELAY
LOAD MOTOR
LOAD MOTOR
+18V
WRITE ENABLE
-18V

SEE SHEET ONE

SERVO

AMPEX

SCHEMATIC SERVO BOARD

5203821

D 5203321

REVISIONS				
	DESCRIPTION	DAI	DRAFTSMAN	DATE	APPROVAL
L	SEE SHEET ONE				

173-012
8 PLS.

600-036
A/R

5299999-386

INSTALL INSULATING
BUSH 3 PLS
014-292 2 REQ'D

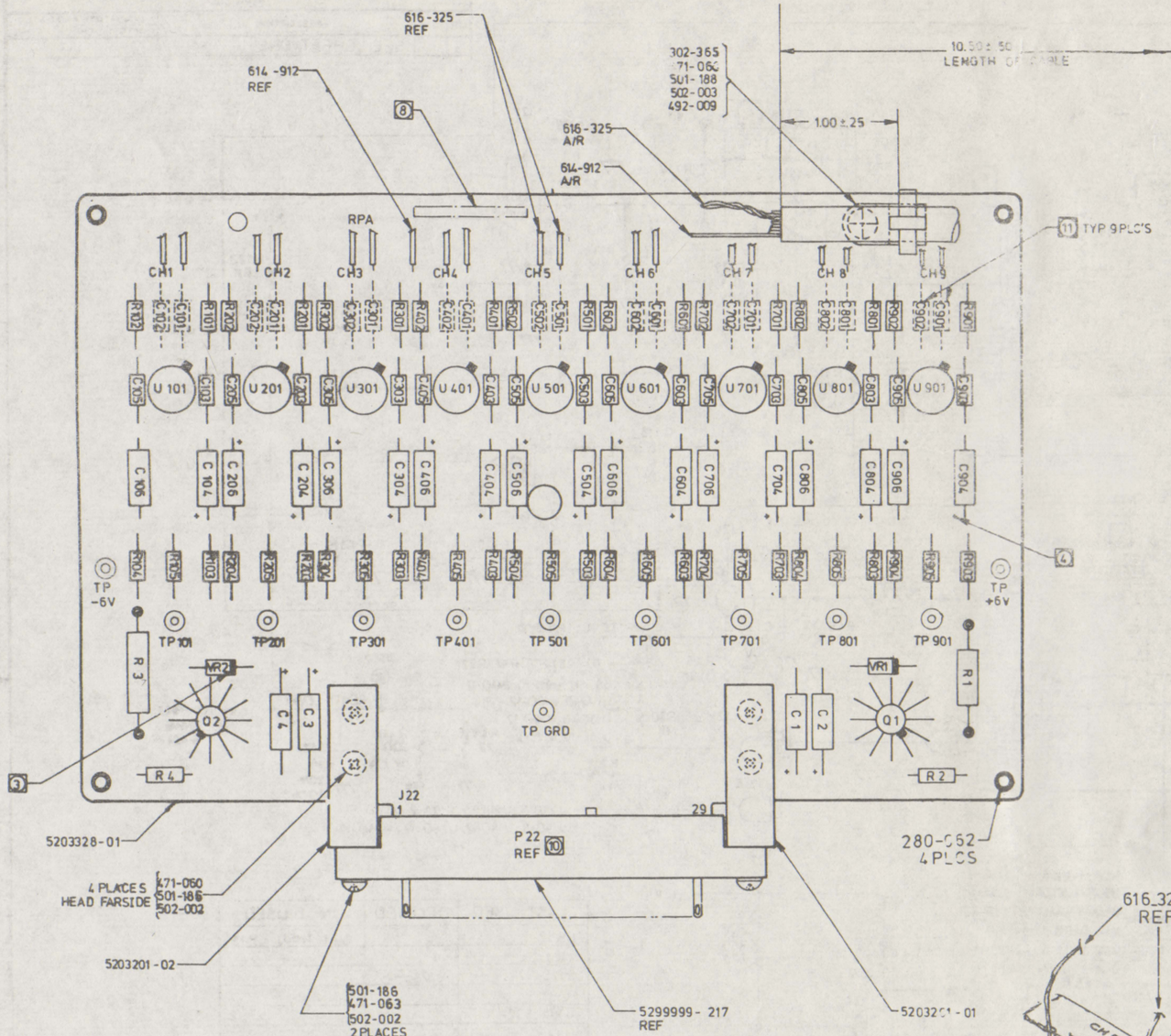
5203341-01
2 PLS

172-008
5 PLS

5203823-01

SIZE	CODE IDENT NO	
D	09150	5203822
SCALE	NONE	SHT 2 OF 3

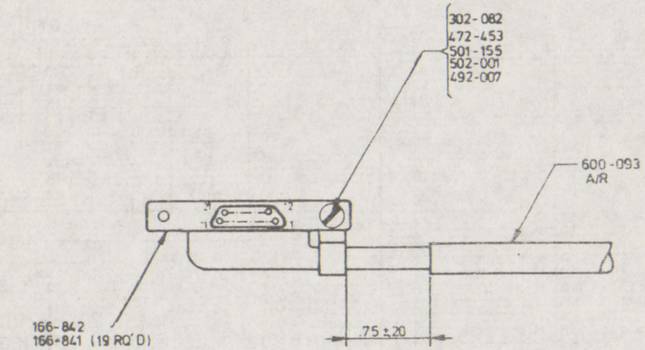
			DATE		DATE
G	ECN N 2527				

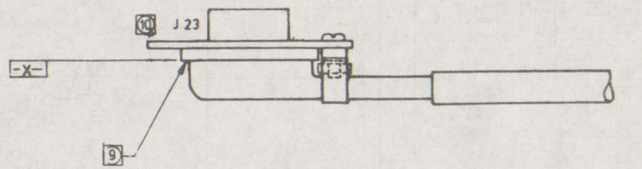


WIRING CHART

TWISTED PAIR	CONDUCTOR COLOR	CONNECTOR J23 TERMINAL
CH1	WHITE	10
	GREY	20
CH2	WHITE	9
	GREY	19
CH3	WHITE	8
	GREY	18
CH4	WHITE	7
	GREY	17
CH5	WHITE	6
	GREY	16
CH6	WHITE	5
	GREY	15
CH7	WHITE	4
	GREY	14
CH8	WHITE	3
	GREY	13
CH9	WHITE	2
	GREY	12
SHIELD	GREY	21

PART NO	REFERENCE DESIGNATION
5299999-250	C103, 105 THRU C903, 905
013-224	VR1, 2
014-247	Q1
014-364	Q2
037-985	C1, 2, 3, 4, C104, 106 THRU 904, 906
5299997-102	R105 THRU 505
5299997-470	R103, 104 THRU 903, 904
5299997-511	R101, 102 THRU 901, 902
173-012	TP101 THRU TP901, TP+5V, TP-5V, GRD
586-289	U101 THRU U901
041-669	R1, R3
5299997-271	R2, R4
11	C101, 102 THRU C901, 902





11 OPEN FOR -01
P/N 034-177 FOR -02.

10 MARK REFERENCE DESIGNATIONS PER AMPEX SPEC 3128856, PARA 3.1

9 AFTER INSERTING WIRES, POT AREA INDICATED WITH EPOXY 2651-MM (922-3271) OR EQUIVALENT.
POTTING COMPOUND NOT TO PROTUDE BEYOND SURFACE -X-

8 MARK PART NUMBER 5203325-01 AND ISSUE LETTER WITH WHITE INK PER BD 1-1

7 FOR B/M SEE VERSION TABLE.

6 – FOR WIRE LIST SEE 5203415

5 – COMPONENTS DESIGNATIONS ARE FOR REF ONLY

4 PLUS SIGN ON CAPACITOR INDICATES POSITIVE

3 HEAVY LINE ON DIODE INDICATES CATHODE

2 – ASSEMBLE & FABRICATE PER AMPEX HC2-2

1 – FOR SCHEMATIC SEE 5203326

NOTES:

VERSION TABLE 7

FUNCTION	ASSY NO.
TM1998 TIME LO. SPEED	5203325-01
TIME HI. SPEED	5203325-02

PREAMPLIFICATOR

DO NOT SCALE DRAWING

LEMIEUR	
QUINET	
MARRONE	
MAEGERMAN	

AMPEX

PCBA READ PREAMPLIFIER

5203327

5203327 G

SHEET 1 OF 1

REVISIONS			
LTR	ZONE	DESCRIPTION	SIGNATURE AND DATE
S		SEE SHEET ONE	

TYPICAL 9 CIRCUITS

J17 / J18

READ DATA 1A (R) — 17
READ DATA 1B (S) — 18
2A (N) — 15 — R201
2B (P) — 16 — R202
3A (L) — 13 — R301
3B (M) — 14 — R302
4A (K) — 10 — R401
4B (J) — 11 — R402
5A (F) — 9 — R501
5B (H) — 12 — R502
6A (D) — 7 — R601
6B (E) — 8 — R602
7A (B) — 5 — R701
7B (C) — 6 — R702
8A (5) — 1 — R801
8B (4) — 2 — R802
9A (2) — 4 — R901
READ DATA 9B (3) — 3 — R902
9 (7) — +12V
A (1) — −12V
GRD (Z)
RUN (−)
22 — REMOTE ENABLE(−)

R101 1K, C102 2.2, R103 5.1K, C101, R104 5.1K, R102 1K, C103 2.2
Q101, Q102, Q103
C104, R107, R108 1.8K, R109 10K
R105 1K, R106 1K, R110 10K, C105 0.1, C106, C107
R111, FW/REV
TO R211 THRU R911
Q104, R112 1.8K, C108 2.2, R113, C109, R114, R115
C110 0.1 30V
R116, C111, CH 1, R117 1.8K, R125 1K, R118 1K
C113 0.1, JP101, U109 A, C115 0.1
R123 18K, R120 5.1K, R121 2K
C116 0.1 30V, U102 B, R119 7.5K, C117 OPEN, R122 7.5K, C118 0.1, C119 0.1
R44, CR12, R53, Q2, R43, R42, Q1, R41
R10, C10 .22, U5-A, U6-C, C11 1000pF 100V 5%
CR11
U6-D, U6-A, U6-B, U6-C
R47 12K, R46 1.8K, C13 0.1 30V, Q3, R45 1.8K
TP 3, WRITE CLIP LEVEL, TO R222 THRU R922
TP 2, READ LEVEL, TO R[illegible] THRU R[illegible]
+5V U9D-12, U9E-10, U11D-12, U11C-10, U14D-12, U13C-10, U14C-9, U15C-10, U15C-9 SHT 3
R30 1K, R31 1K, R49 22, R48 300 1/2W, C12 15 20V 10%
U17-D, U17-A
U21B-5, U20B-5, U19A-2, U19B-5, U19C-9, U19D-12, U20D-12, U21D-12, U20C-9 SHT 3

J16

HI/LO DENSITY (−/±) — 21
NRZ (+) WRITE (−) — 14 — Z
F.WARE/V (+/−) — 22
JP10 OPEN
+18V — T, X, 20
TP +5V
R52 6.5%, 9W, U22 LM 309K, C24 0.1
+12V — V, 18
−12V — W, 19
ANALOG GND — P, 13
LOGIC GRD — N, 12
TP GRD

U8C-9, U8D-12, U10C-9, U10D-12, U12C-9, U12D-12, U14C-9, U14D-12, U16D-12 SHT 3
U16-C
U7-C
R29 1K
U8A-1, U8B-4, U8A-1, U10B-4, U12A-1, U12B-4, U8A-1, U10A-1, U12A-1, U14A-1, U16B-11, U16A-3, U9B-11, U9A-3, U9B-11, U4A-3, U4B-11, U5B-11 SHT 3
+5V SHT 3
C14 15 20V 10%, C15 0.1, C16 0.1, C17 0.1, C18 0.1, C19 0.1, C20 0.1
C21 15 20V 10%
C22 15 20V 10%, C23 0.1 30V
U24-C, OPEN

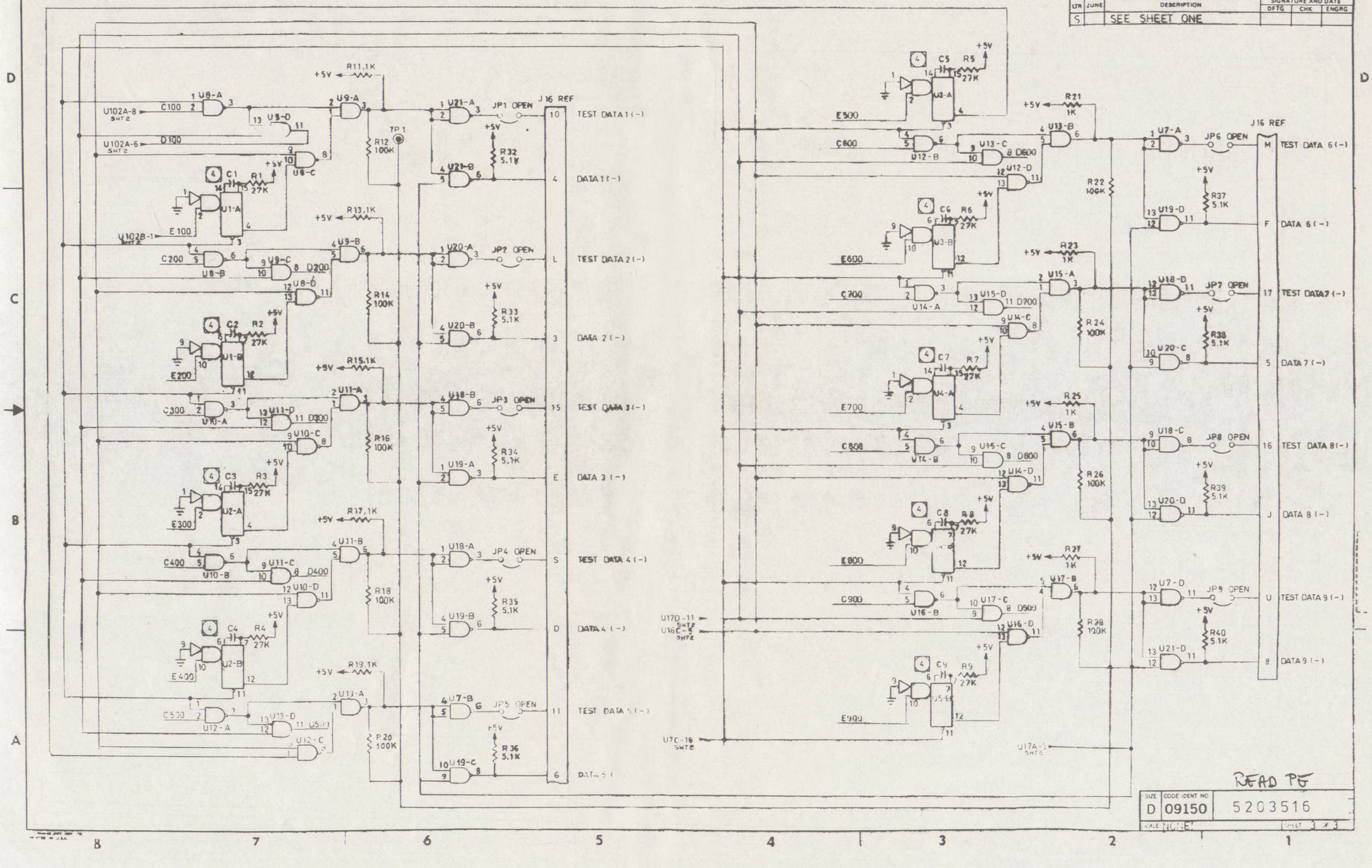
R51 56 3W 3%, R50 270, Q4, M1

U8A-2 SHT 3, U10D-11 SHT 3, U10A-2 SHT 3

LAST USED	DELETED	NOT USED
CR12		CR1 THRU CR10
VR1		
R125, 925	R124, 924	
R53		
U102, 902		
U22		
JP11, 101, 901		
TP3, +5V, GND		
CH3		
C115, 915	C114, 914	
C24		
Q104, 904		
Q4		

D	09150	5203516

REVISIONS					
LTR	ZONE	DESCRIPTION	SIGNATURE AND DATE		
			DFTG	CHK	ENGRG
S		SEE SHEET ONE			

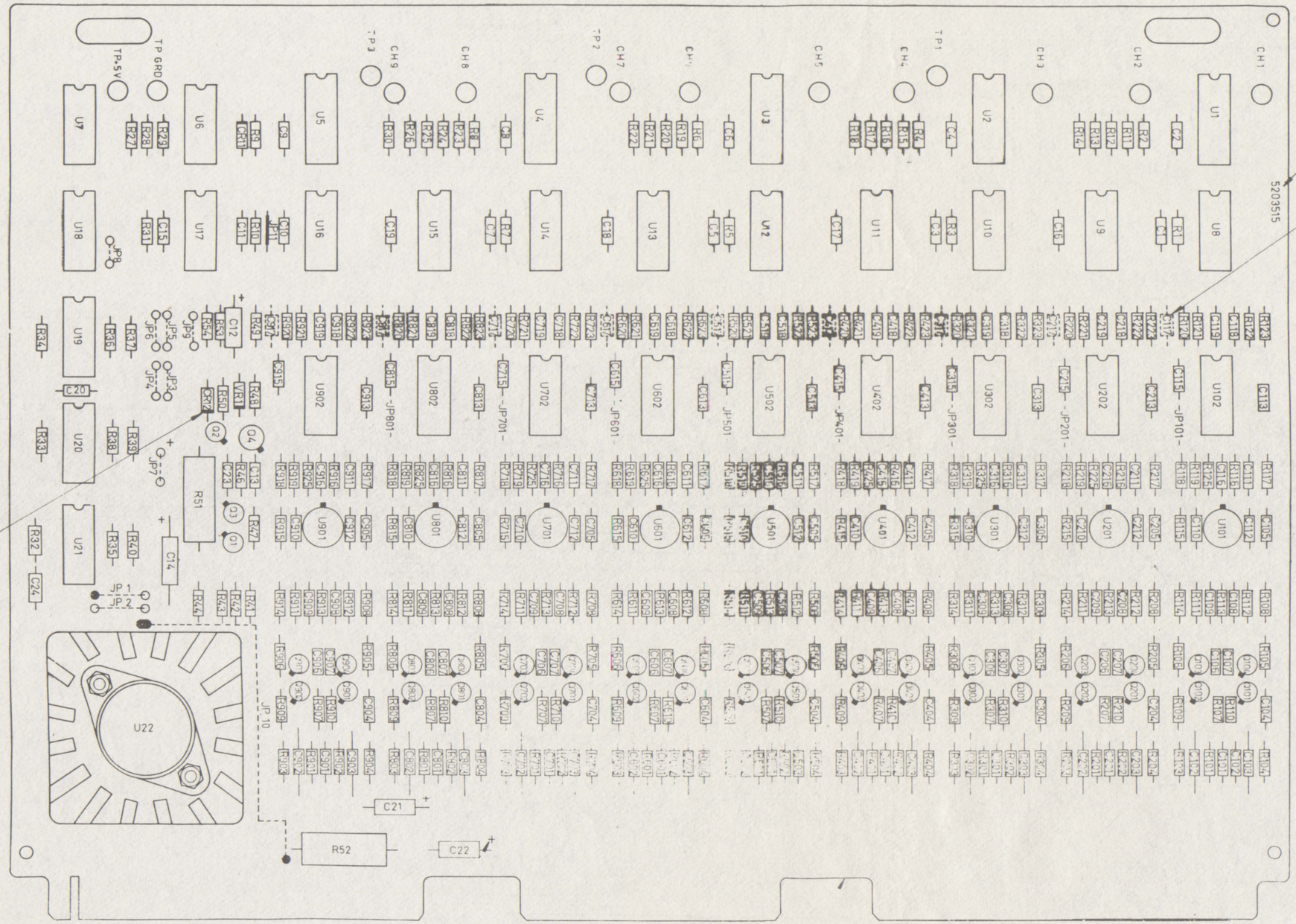


READ PE

SIZE	CODE IDENT NO	
D	09150	5203516

SCALE NONE SHEET 3 OF 3

REVISIONS					
LTR	ZONE	DESCRIPTION	SIGNATURE AND DATE		
			DFTG	CHK	ENGRG
S		SEE SHEET ONE			



READ PE

SIZE	DRAWING NO.	
D	09150	5203517

REVISIONS				
LTR	ZONE	DESCRIPTION	SIGNATURE AND DATE DFTG	CHK	ENGRG
		SEE SHEET ONE			

FROM PREAMPLIFIER

CHANNEL 1

H1/LO(-/+)

READ PERMIT(-)

NRZ(+)

FWD/REV(+/-)

LOW READ THRESHOLD(-)

WRITE(-)

LOGIC GRD

+5V

+18V

READ PERMIT(+)

REMOTE ENABLE 2

CLIP LEVEL

U101-1
U102-1
U103-1

U104-14
U105-14

U101-4
U102-4

U101-8
U102-8

U204-6
U304-6
U404-6
U504-6

U604-6

U704-6

U804-6

U904-6

U8-6
U8-2
U12-6
U12-2
U10-2
+5V
U7-2
U11-6
U10-6
U11-2

U104-5 THRU U904-5

R222 THRU R922

CR102 THRU CR902

CR101 THRU CR901

J16 REF

4	READ DATA 1 (5)(-)
10	DATA 1 (-)
3	READ DATA 2 (7)(-)
L	DATA 2 (-)
E	READ DATA 3 (3)(-)
15	DATA 3 (-)
D	READ DATA 4 (P)(-)
S	DATA 4 (-)
6	READ DATA 5 (2)(-)
11	DATA 5 (-)
F	READ DATA 6 (1)(-)
M	DATA 6 (-)
5	READ DATA 7 (0)(-)
17	DATA 7 (-)
J	READ DATA 8 (6)(-)
15	DATA 8 (-)
B	READ DATA 9 (4)(-)
-	DATA 9 (-)
P	READ STROBE (+)
-	READ STROBE (-)
-	GRD

■ DENOTES OUTPUTS TO INTERFACE
● DENOTES OUTPUTS TO OPTIONS CARD WHEN INSTALLED

READ NRZ

SIZE	CODE IDENT NO	
D	09150	5203311

SCALE 1:1 SHEET 3 OF 3

REVISIONS				
LTR	ZONE	DESCRIPTION	SIGNATURE AND DATE DFTG	CHK	ENGRG
		SEE SHEET ONE			

JP3

JP1

614-762 A/R

RDA 5203310

J16 J17 J18

B1 B22 2 30 B1 B22

5203313-01

TYP TSTR MOUNTING TO 18 TYP

280-052

TYP TSTR MOUNTING TO 5 TYP

280-051

014-247 REF

014-555

280-051

TYP TSTR MOUNTING TO 5 WITH HEAT SINK

586-124 REF

TYP IC MOUNTING TYP 27 PLCS

THRU 910

103307-02

TYP RESISTOR MOUNTING TYP 4 PL

5299999-315

586-756 REF

471-065 2 REQD

492-008 2 REQD

502-002 2 REQD

501-195 2 REQD

087-388

MICA INSULATING 014-292

501-195 2 REQD

TYP IC MOUNTING WITH HEAT SINK

READ HRZ

SIZE	CODE IDENT NO	
D	09150	5203312
ALE	NONE	SHEET 3 OF 3

REVISIONS					
LTR	ZONE	DESCRIPTION	SIGNATURE AND DATE DPTG	CHK	ENGR
E		SEE SH1	—	—	—

5204751

WRITE

SIZE	CODE IDENT NO	
D	09150	5 2 0 4 7 5 1

SCALE NONE SHEET 3 OF 3

5204751

REVISIONS					
LTR	ZONE	DESCRIPTION	SIGNATURE AND DATE DFTG	CHK	ENGRG
E		SEE SH 1	—	—	—

WD4(-) J10 5 — SOC3 180 — SOC3 470 — J12 J 8

WD5(-) J10 4 — SOC3 180 — SOC3 470 — J12 M 11

WD6(-) J12 3 — SOC4 180 — SOC4 470 — J12 H 7

WD7(-) J10 2 — SOC5 180 — SOC5 470 — J12 F 6

WD8(-) J10 A — SOC5 180 — SOC5 470 — J12 E 5

WD9(-) J12 C 3 — SOC5 180 — SOC5 470 — J12 C 3

CR14-K,SH3

U18 LS14 · U21 LS04 · U20 LS00 · U12 LS107 · CR401 IN4446 · R401 1K · R403 180 · Q401 2N2369A · CR403 IN4445 · C402 750P · CR402 IN4446 · R402 1K · Q402 2N2369A · R404 180 · +5V

U9 LS08 · U20 LS00 · U19 121 · SOC8, C5 · R405 · CKT400

U18 LS14 · U21 LS04 · U14 LS00 · U15 LS107 · CR501 IN4446 · R501 1K · R503 180 · Q501 2N2369A · CR503 IN4446 C502 750P · CR502 IN4446 · R502 1K · Q502 2N2369A · R504 180 · +5V

U27 LS08 · U14 LS00 · U13 121 · SOC7, C1 · R505 · CKT500

U18 LS14 · U21 LS04 · U17 LS00 · U15 LS107 · CR601 IN4446 · R601 1K · R603 180 · Q601 2N2369A · CR603 IN4446 C602 750P · CR602 IN4446 · R602 1K · Q602 2N2369A · R604 180 · +5V

U27 LS08 · U17 LS00 · U16 121 · SOC7, C2 · R605 · CKT600

WRITE HEAD CH4 · WRITE HEAD CH5 · WRITE HEAD CH6

CKT100-2 THRU CKT300-2 SH1 · U41-4 SH3 FF CLR 3 · WRITE RES P · CKT100-4 THRU CKT300-4 SH 1 · U34-6 SH3 · CKT100-5 THRU CKT300-5 SH1 · CKT100-6 THRU CKT300-6 SH1

U32 LS14 · U33 LS04 · U23 LS00 · U24 LS107 · CR701 IN4446 · R701 1K · R703 180 · Q701 2N2369A · CR703 IN4446 C702 750P · CR702 IN4446 · R702 1K · Q702 2N2369A · R704 180 · +5V

U27 LS08 · U23 LS00 · U22 121 · SOC7, C3 · R705 · CKT700

U32 LS14 · U33 LS04 · U26 LS00 · U24 LS107 · CR801 IN4446 · R801 1K · R803 180 · Q801 2N2369A · CR803 IN4446 C802 750P · CR802 IN4446 · R802 1K · Q802 2N2369A · R804 180 · +5V

U27 LS08 · U26 LS00 · U25 121 · SOC7, C4 · R805 · CKT800

U32 LS14 · U33 LS04 · U29 LS00 · U30 LS107 · CR901 IN4446 · R901 1K · R903 180 · Q901 2N2369A · CR903 IN4446 C902 750P · CR902 IN4446 · R902 1K · Q902 2N2369A · R904 180 · +5V

U31 LS08 · U29 LS00 · U28 121 · SOC7, C5 · R905 · CKT900

WRITE HEAD CH7 · WRITE HEAD CH8 · WRITE HEAD CH9

U41-2 SH1 FF CLR2

WRITE

SIZE	CAGE CODE NO	DRAWING NO
D	09150	5204751

SCALE — SHEET 2 of 3

REVISIONS					
LTR	ZONE	DESCRIPTION	SIGNATURE AND DATE DFTG	CHK	ENGRG
D		N/739			
		REDRAWN NO CHANGE	6-15-79		
E		CNN2820-3			

LAST USED	DELETED	OPEN
VR4		VR3
CR15,903	CR8,9,10,11,12,13	CR15
Q6,902		
R39,905	R21,35	R34
C32,902	C101 THRU 901	C12,31,32
SOC8		
U44		
TP5		
JP5		
SCR1		SCR1
W1		

VERSION TABLE (4)

	ASSY P/N	DESCRIPTION
TM100+/TME	5204750-01	JP4
TM100	5204750-02	R39(6Ω,9W,5%)

SPARES

U33 LS04 — U38 LS02 — U40 7408 — U40 7408

(4) SEE VERSION TABLE.

3. ALL CAPACITORS VALUES TO BE IN FARAD.
2. ALL RESISTORS VALUES TO BE IN OHM 1/4W 2%.
1. FOR B/M SEE 5204750.

NOTES: UNLESS OTHERWISE SPECIFIED

PARTS LIST ☐ WRITE

5204750	TM100-E			
PART NO.	USED ON			
APPLICATION				

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UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES AND INCLUDE CHEMICALLY APPLIED OR PLATED FINISHES
TOL ± | 2 PL | 3 PL | ANLR
REMOVE BURRS AND SHARP EDGES
INTERPRET DRAWING PER ANSI Y14.5

SIGNATURE	DATE
DRAWN BY	
CHK BY	
DFTG APVD	
ENGRG APVD	
AUTH BY	

MATERIAL
FINISH

AMPEX MEMORY PRODUCTS DIVISION 230 N. Nash Street El Segundo, California 90245

SCHEMATIC WRITE ELEC PE/NRZ

SIZE	CODE IDENT NO.	
D	09150	5 2 0 4 7 5 1

SCALE NONE | DO NOT SCALE THIS PRINT | SHEET 1 OF 3

REVISIONS					
LTR	ZONE	DESCRIPTION	SIGNATURE AND DATE		
			DFTG	CHK	ENGRG
D		SEE SHEET 1			

5204753-01

TP1 TP2 TP3 TP4 TP5

R16 R105 R205 R305 R405 R505 R605 R705 R805 R905

C32 OPEN

C18 C4 C3 C2 R6 R5 R4 R3 R37 R38

U1 R23 R24 VR1 C15 R24 C45 R20

U2 C12 OPEN C11 C13 VR2 R31

U34 U35 U36 U37 U38 U39 U40 U41 U42 U43 U44

CR1 R2 R1 R32 C19 C14 R30

JP5 JP3 JP2 JP1 SOC6 REF.

W1

U4 U5 U6 C21 U7 U8 C22 U9 U10 U11 U12

C20

U13 C23 U14 U15 U16 C24 U17 C25 U18 U19 U20 U21

U22 C26 U23 U24 U25 U26 U27 U28 U25 U30

C29

C28

U31 U32 U33

SOC7 REF. SOC8 SOC3 REF. SOC4 SOC5 REF.

C31 OPEN C30

CR14

582-115 8PLC'S

Q6 Q2 VR4 Q5 Q3 Q4 C27 C1

R17 R22 R19 R14 R13 R12 R11 R15 CR4 C6 R9 C7 CR7 R12 R10 C5 R8 CR2 R7 CR3 R33 R26 R25 R28 R27 CR5

SOC1 REF. SOC2 REF.

R36 CR15 OPEN

Q1 U3

C8 C17 VR3 OPEN VR4 OPEN SCR1 OPEN

C16 C9 C10

R901 R902 R801 R802 R701 R702 R601 R602 R501 R502 R401 R402 R301 R302 R201 R202 R101 R102

R903 R904 R803 R804 R703 R704 R603 R604 R503 R504 R403 R404 R303 R304 R203 R204 R103 R104

C902 C802 C702 C602 C502 C402 C302 C202 C102

J10 J11 J12

JP4 or R39

(1)

COMPONENT SIDE

014-679 280-051

TYP XTR MTG FOR U1,U2&Q2 SCALE: NONE

TYP XTR MTG FOR Q4 SCALE: NONE

280-052

TYP TO-18 XTR MTG TYP 21 PLCS SCALE: NONE

103307-02 2 PLCS

TYP RES MTG FOR R103 THRU R903 & R104 THRU R904 TYP 18 PLCS

(10) FOR R39 (ONLY FOR -02 VERSION)

SCALE: NONE

103307-01 2 PLCS

TYP RES MTG FOR R36, R26, R27 SCALE: NONE

5299999-315

014-292 2 PLCS 087-388 A/R

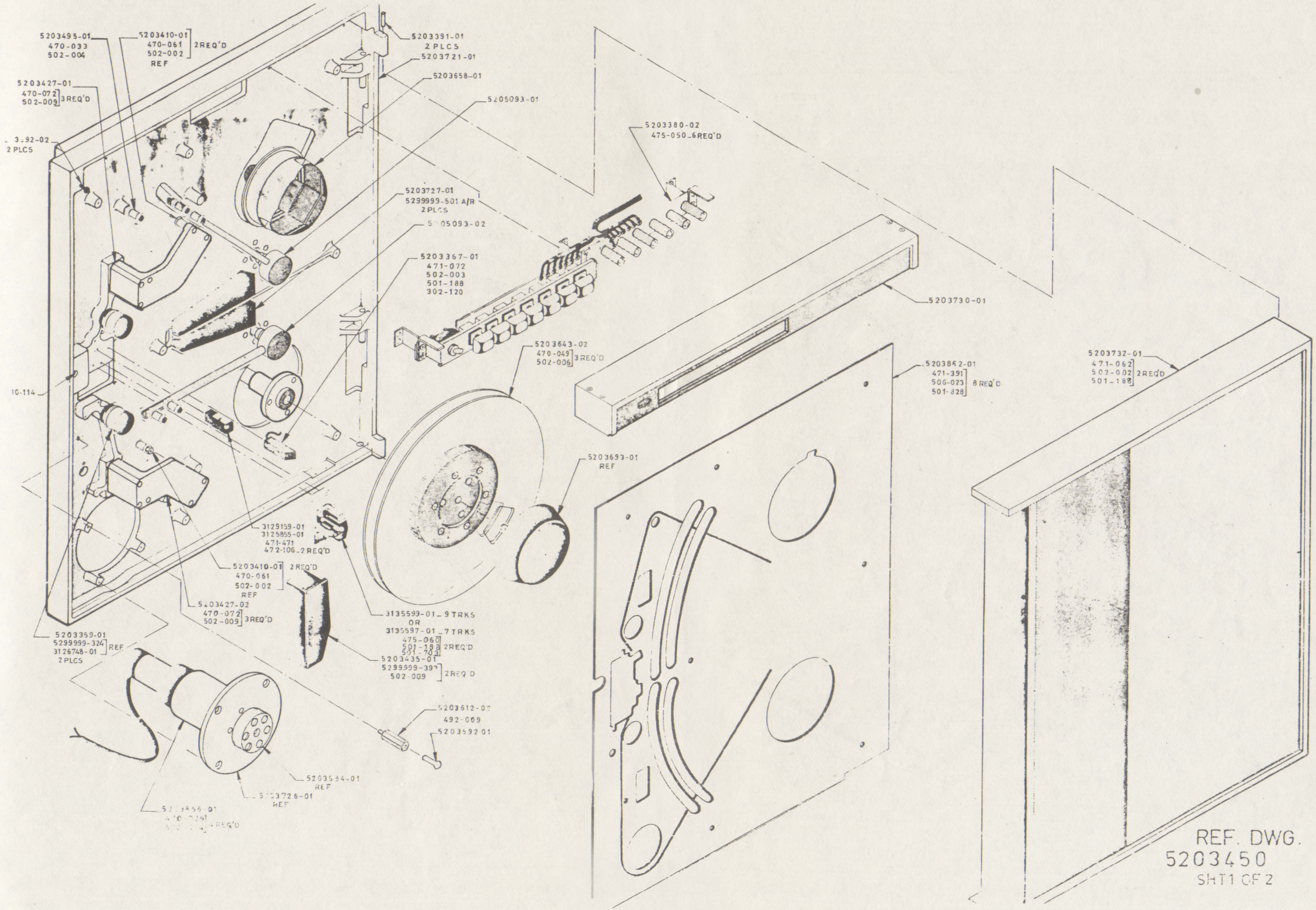
492-008 501-195 502-032 471-055 2PL

TYP MTG FOR Q1, U3 SCALE: NONE

WRITE

SIZE	CODE IDENT NO.	
D	09150	5204752

SHT 2 OF 2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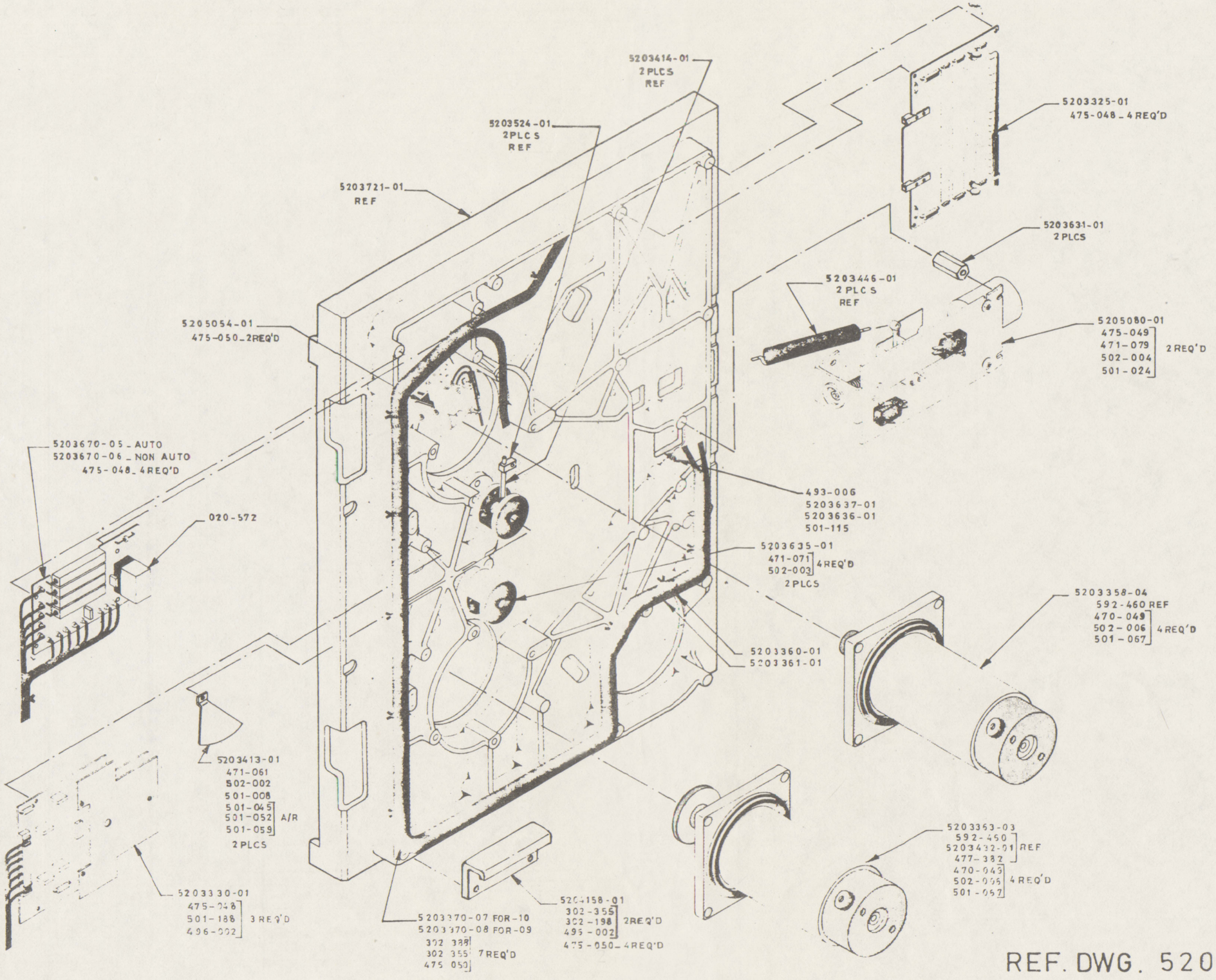
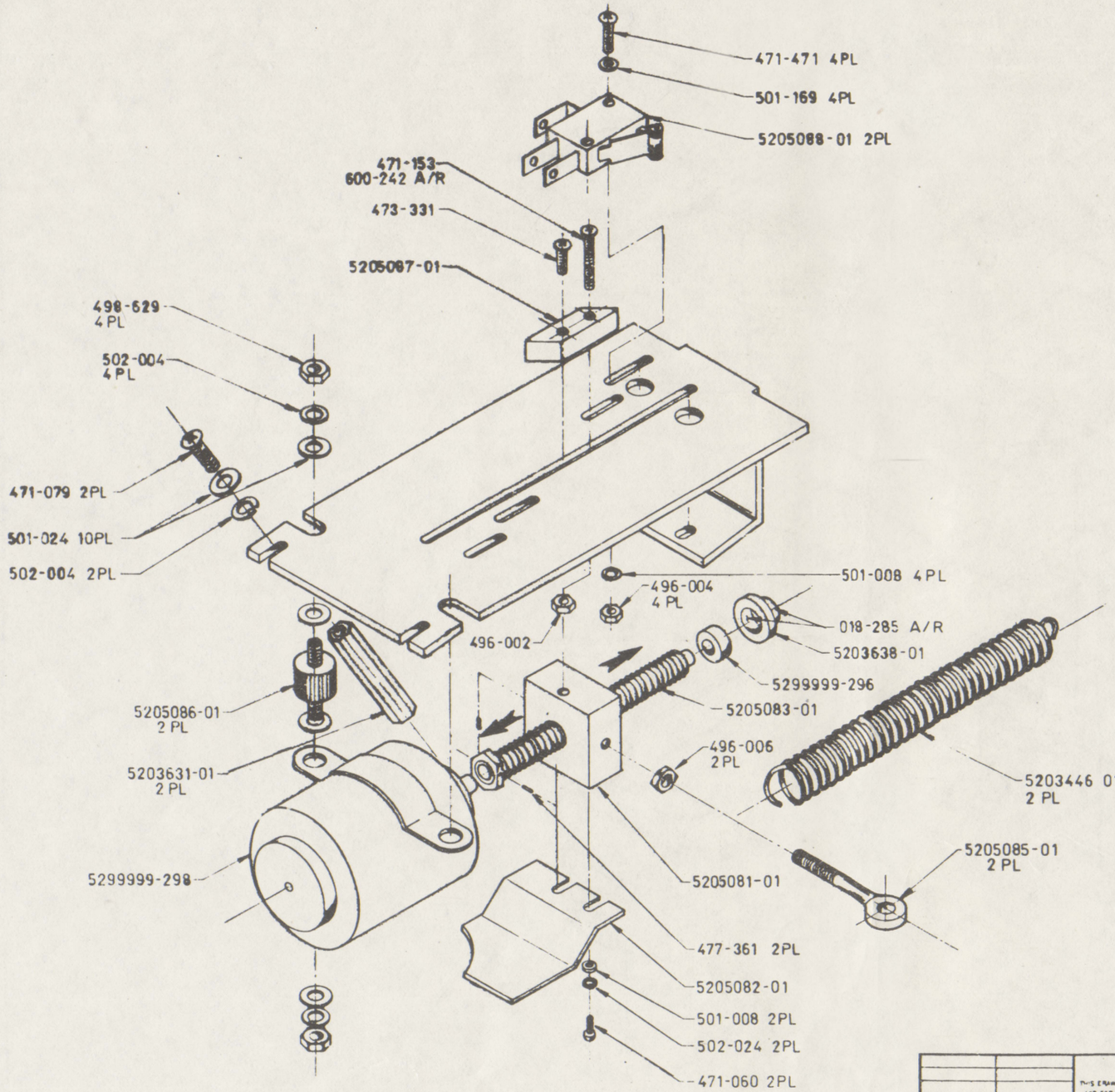
470-033
502-004
5203410-01
470-061
502-002
REF
2 REQ'D
5203427-01
470-072
502-009
3 REQ'D
3-92-02
2 PLCS
10-114
5203391-01
2 PLCS
5203721-01
5203658-01
5205093-01
5203380-02
475-050 6 REQ'D
5203727-01
5299999-501 A/R
2 PLCS
5205093-02
5203367-01
471-072
502-003
501-188
302-120
5203643-02
470-049
502-006
3 REQ'D
5203730-01
5203862-01
471-391
506-023
501-828
8 REQ'D
5203732-01
471-062
502-002
501-188
2 REQ'D
5203693-01
REF
3129159-01
3125855-01
471-471
472-106 2 REQ'D
5203410-01
470-061
502-002
REF
2 REQ'D
5203427-02
470-072
502-009
3 REQ'D
5203359-01
5299999-324
3126748-01
REF
2 PLCS
3135599-01 9 TRKS
OR
3135597-01 7 TRKS
475-060
501-188
501-703
2 REQ'D
5203435-01
5299999-399
502-009
2 REQ'D
5203612-02
492-009
5203592-01
5203584-01
REF
5203726-01
REF
REF. DWG.
5203450
SHT 1 OF 2

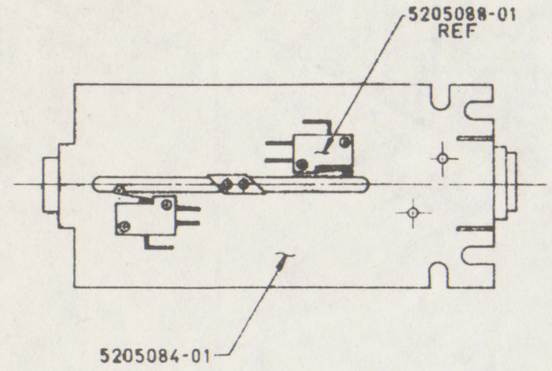


REF. DWG. 5203450

SHT 2 OF 2

REVISIONS					
LTR	ZONE	DESCRIPTION	DRAWN / CHK		
D		PROTO			
E		ERN N2621			
F		ECN N2733-2			
G		ECN N2763-2			
		REDRAWN NO CHANGE			





1. ASSEMBLE PER AMPEX STDS.

NOTES: UNLESS OTHERWISE SPECIFIED

	NOTICE	UNLESS OTHERWISE SPECIFIED	SIGNATURE / DATE
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		REMOVE BURRS AND SHARP EDGES. DRILL THRU PER AND TAP	
		INTERPRET MACHINE FINISH	MATERIAL
			FINISH

AMPEX — MEMORY PRODUCTS DIVISION

LOAD SYSTEM ASSY. (REF. DWG)

SIZE	CODE IDENT NO	
D	09150	5205089

SCALE: NONE — DO NOT SCALE THIS PRINT — SHEET 1 OF 1

5205089

SEE SHEET ONE

8PLC'S 476-582 501-185

4PLC'S 476-582 501-185 475-050 4PLC'S

REF CARD CAGE WELDED

REF INTERCONN BD ASSY FOR -01,-03-05-07 -11,-13,-15,-17

DETAIL "A"

A-IEN J82,88 ARE NOT MOUNTED ON MOTHER BD. FOR-02-04-06-08 -12,-14,-16,-18

REAR VIEW

280-007

264-004

167-451

167-542 2PLC'S

475-085 8PLC'S

3107903-17

PART B

SEE DETAIL "A"

171-066 3PLC'S

616-636 A/R

473-331 2PLC'S

167-450 167-559 167-543 2PLC'S

FROM TXFMR

496-005

501-009

472-487

501-067 4PLC'S

501-009 475-047

501-055

473-328 302-067 501-008 302-061

473-328 302-066 501-008 302-061

5204534-01 A/R

503-047

5251545-02

530-218 TYP 18 PLC'S FOR -01,-03,-05,-07,-11,-13,-15,-17 TYP 10 PLC'S FOR -02,-04,-06,-08,-12,-14,-16,-18

5204501-02

5204192-01

5203837-01

PART F

167-023 167-542 167-543 3PLC'S

FOR BC HARNESS

501-009 4PLCS 496-005

591-027 2PLC'S

5205100-01

475-085 or 475-050 2PLC'S

FOR BP11

SUPLIED WITH CIRCUIT BKT.

085-001 TYP 4PLCS FOR -01,-02 -03,-04,-11,-12,-13-14

TYP 5PLCS FOR-05-06 07-08,-15-16-17-18

F1 F2 P/N 070-017
F3 070-001
F4 PART G
F5 PART H

PART A

TYPICAL MOUNTING FOR INTERCONNECT BOARD ASSY

503-993 501-189 473-327

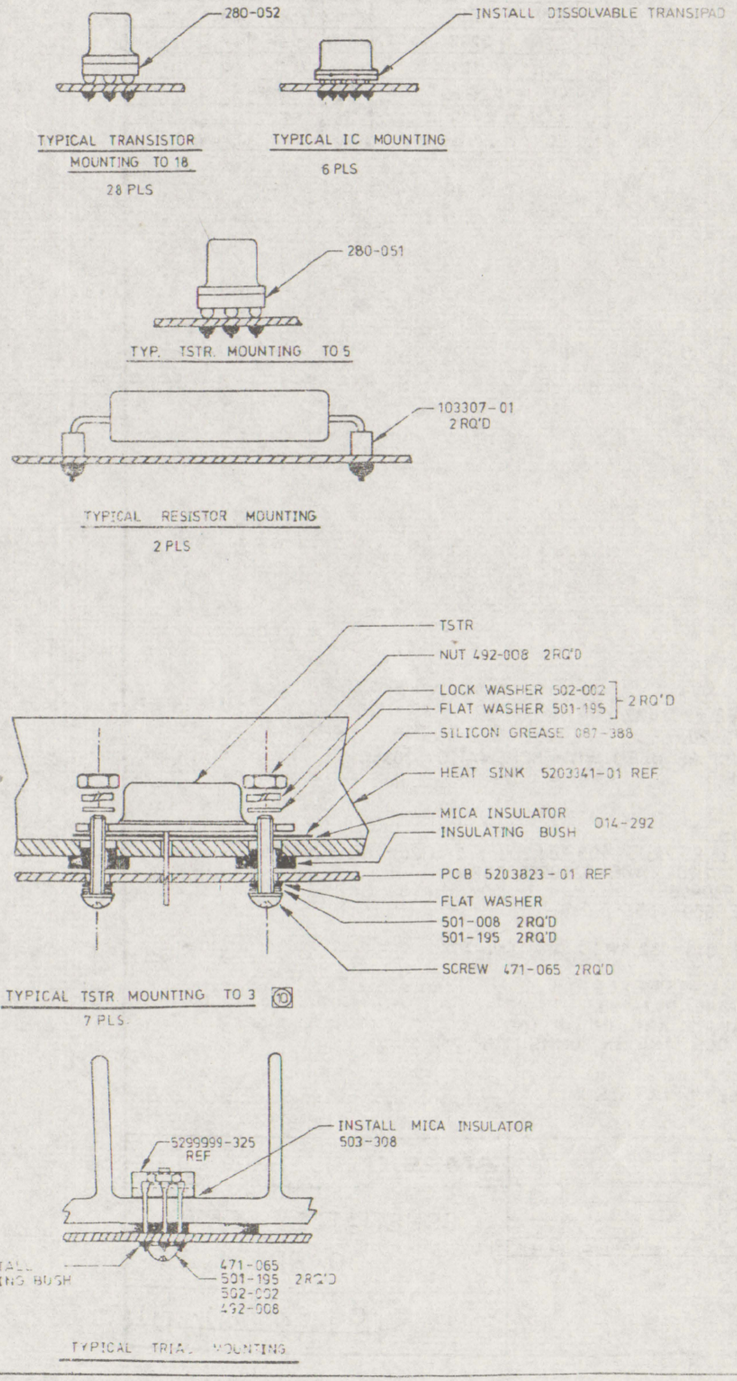
REF INTERCONN. BD. ASSY

REF CARD CAGE WELDED

TYP 20 PLCS FOR -02,-04,-06,-08,-12,-14,-16,-18

TYP 40 PLCS FOR -01,-03,-05,-07,-11,-13,-15,-17

5205057 C



P/N	DESIGNATIONS
013-166	CR102,103,202
013-257	VR3
013-358	VR4,5,101,201
014-247	Q13
014-597	Q19
037-629	C13
5299997-152	R14
037-839	C105,206
(9) PART A	C14
037-985	C 12,15,16,19,20, [illegible]
037-736	C11
041-501	R23 THRU [illegible] ,211
(9) PART E	R11
041-765	R1,18,218
055-961	C2
173-012	TP1 THRU [illegible] 10
(12) 580-465	Q23, 106, 206
580-466	Q22,105,205
581-157	CR [illegible] 25 THRU 28,101,104,201,204
586-109	U5
-124	U4
-269	U12
-282	U [illegible] 201
-326	U8
-581	U7
-784	U6
-871	U9
586-890	U10
(9) PART B	JP1
5299997-100	R 108,208 2 RQ'D
-101	R 16,26,56
-102	R 12,29,[illegible] 84, 89,105,109,119,121,123,126,205,209,219,221,223 224,62
-103	R 28, [illegible] 13,5
-104	R 31,57
5299997-112	R 1,2
(8) PART C	R 27
5299997-304	R 66
5299997-152	R 8
-153	R 15,17,69, 107,202
-162	R 3,4
-181	R 47,63
-201	R 70
-222	R 20, 59,60,61, 86,90,91,
-242	R 31,106,206
-243	R 118,218
-271	R 53
-272	R 6,
-273	R 73,78,82,28,99
-302	R 9,11,58,43
-369	R 112,212
-391	R 46,57,72,77,81
-471	R [illegible] 41,21,22,102, [illegible] 02,110,210
-510	R 94,96
-511	R 103,203
-512	R 40,65,93
-562	R 5,7,34
-563	R 30,33
-680	R 18
-822	R 95,97,117,217,5
-823	R 19,114,214
-821	R 65
5299997-911	R 64
5299998-102	R 87
5299998-121	R 48
5299998-152	R 88
581-457	VR 1,2
5299999-256	Q 3,5,7, 102,104,202,204
-257	Q 4,6,8,10,12,14,15 THRU 18,20,21,101,103,201,203,1,2,26,11
-262	R 51,98,120,220,52
-318	R 49,50
-319	R 122,222
-325	Q 25
-347	C 1, 5,17,22,24 THRU 27,102,103,104,202,203,204
-362	C 23
-250	C 6,7,101,105,201,205
-386	SOC 1
5299999-387	C 9,10,29,108,109,110, 208,209,210
(9) PART D	C 8
614-762	JP2
(10) OPEN	R35,36,37
(11) OPEN	Q9,24
5299997-123	R85
037-733	C4

REVISIONS					
	DESCRIPTION	DATE	DRAFTSMAN	DATE	APPROVAL
A	ECN N 1978/N2026				
B	ECN N 2201	13-XII-74	AV		
C	ECN N 2204	23-XII-74	HG		
D	ECN N 2205	1-9-75	HG		
E	ECN N 2214	15-10-75	HG		
F	ECN N 2218	22-X-75	HG		
G	ECN N 2292	26.XI.75	HG		
H	ECN N 2492	12.FEB.76	HG		
J	ECN N 2610	7 JUIN 76	[illegible]		
K	ECN N 2714/3	11 OCT 76	MBE		
L	ECN N 2751-3	3 NOV 76	KG		

TABLE 1 (9)

FUNCTION	ASSY NO.	PART A	PART B	PART C	PART D	PART E
AUTO >12,5 IPS	5203820-10	037-746	OPEN	OPEN	OPEN	041-762
N.AUTO>12,5 IPS	5203820-20	OPEN	OPEN	OPEN	OPEN	041-762
AUTO 12,5 IPS	5203820-11	037-746	OPEN	OPEN	OPEN	041-444
N.AUTO 12,5 IPS	5203820-21	OPEN	OPEN	OPEN	OPEN	041-444

(11) THESE COMPONENTS ARE OPEN.
(10) DO NOT USE MICA INSULATOR ON Q 106,206.
(9) SEE TABLE 1.
(8) HEAVY LINE ON DIODES INDICATES CATHODE.
7. FOR SCHEMATIC SEE 5203821.
(6) MARK DASH NO. & ISSUE LETTER WITH WHITE INK PER BD1-1.
5. TRIMPOTS NOT TO BE SUBMERGED IN WATER.
(4) PLUS SIGN ON CAPACITOR INDICATES POSITIVE.
3. P/N TO BE AS PER TABLE 1.
2. COMPONENT DESIGNATIONS ARE FOR REF. ONLY.
1. ASSEMBLE PER AMPEX STD HC2-2.

NOTES:

DO NOT SCALE DRAWING
UNLESS OTHERWISE SPECIFIED

5203822

AMPEX S.A. NIVELLES BELGIUM

PCBA
SERVO BOARD

D 5203822 L
NONE SHT 1 OF 2

5203820 TM 100

LAST USED	
R99	CR28,104,204
R124,224	Q25,106,206
TP6,101,201	JP2
C29,110,210	U10,101,201
VR5,101,201	SOC.1

NOT USED	DELETED
R16,38,44,45	
R104,204	
C107,207	
C3	
CR6,11,12,13,14,24,1	

INTEGRATED CIRCUIT LIST

AMPEX P/N	586-109	586-124	586-269	586-282	586-326	586-581	586-784	586-871	586-890
COM. P/N	SN 7402 N	µA710 C	µA 741	MC 1439	SN7404 N	SN 7403 N	SN 7438 N	SN 7413 N	SN 7417 N
REF. DES.	U5	U3, U4	U1, U2	U101, U201	U8	U7	U6	U9	U10

VERSION TABLE (14)

P/N	COMPONENT DESIG.				
	C14	JP1	C8	R27	R13
5203820-10	47µF, 20V	OPEN	OPEN	OPEN	360K
5203820-20	OPEN	OPEN	OPEN	OPEN	360K
5203820-11	47uF, 20V	OPEN	OPEN	OPEN	680K
5203820-21	OPEN	OPEN	OPEN	OPEN	680K

DASH NO.	FUNCTION
-21	NON AUTO 12.5 IPS
-11	AUTO 12.5 IPS
-20	NON AUTO > 12.5 IPS
-10	AUTO > 12.5 IPS

REVISIONS					
LTR	DESCRIPTION	DATE	DRAFTSMAN	DATE	APPROVED
A	ECN N 1978/N2026	[illegible]	[illegible]		
B	ECN N 2144	[illegible]	[illegible]		
C	ECN N 2201	[illegible]	[illegible]		
D	ECN N 2204	[illegible]	[illegible]		
E	ECN N 2205	[illegible]	[illegible]		
F	ECN N 2214	[illegible]	[illegible]		
G	ECN N 2218	[illegible]	[illegible]		
H	ECN N 2292	[illegible]	[illegible]		
J	ECN N 2497	[illegible]	[illegible]		
K	ECN N 2610	[illegible]	[illegible]		
L	ECN N 2714/2	[illegible]	[illegible]		
M	ECN N 2751-2	[illegible]	[illegible]		

18 JP2 TO BE 614-762
17 FOR PCBA R.DWG. SEE 5203822
16. FOR B/M SEE 5203820
15. THIS SCHEMATIC MUST BE USED WITH SCHEMATIC 5203541.
14 SEE VERSION TABLE.
13. Q19 IS 014-597.
12. Q13 IS 014-247.
11. Q25 IS 5299999-325.
10. Q4,6,8,10,12,15 THRU 18,20,21,101,103,201,203, 1, 2,14,26,11ARE 5299999-257.
9. Q3,5,7,9, 102,104,202,204 ARE 5299999-256.
8. Q22,105,205 ARE 580-466.
7. Q23,24,106,206 ARE 580-465.
6. ~~VR5 IS 013-224.~~
5. VR4,5 ,101,201 ARE 013-358; VR1,2 ARE 581-457.
4. VR3 IS 013-257.
3. ALL DIODES ARE 581-157 EXCEPT CR102,103,202,203 ARE 013-188.
2. ALL CAPACITOR VALUES ARE IN µF, 100V.
1. ALL RESISTOR VALUES ARE IN OHMS 1/4W, 2%.

NOTES: UNLESS OTHERWISE SPECIFIED.

DO NOT SCALE DRAWING

5203821

GREGOIRE

AMPEX

SCHEMATIC SERVO BOARD

C 5203821 M

NONE 1 OF 2

5203820

REF	PART NO	DESCRIPTION	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
R1	5299997-221	220Ω 1/4W 2%										X	X	X	X	X	X	X																																				
R2	-221	220Ω										X	X	X	X	X	X	X																																			
R3	-331	330Ω										X	X	X	X	X	X	X																																			
R4	-331	330Ω										X	X	X	X	X	X	X																																			
R5	-182	1.8K										X	X	X	X	X	X	X																																			
R6	-123	12K										X	X	X	X	X	X	X																																			
R7	-182	1.8K										X	X	X	X	X	X	X																																			
R8	-331	330Ω										X	X	X	X	X	X	X																																			
R9	-182	1.8K										X	X	X	X	X	X	X																																			
R10	-391	390Ω										X	X	X	X	X	X	X																																			
R11	-102	1K										X	X	X	X	X	X	X																																			
R12	-681	680Ω										X	X	X	X	X	X	X																																			
R13	-681	680Ω										X	X	X	X	X	X	X																																			
R14	-182	1.8K										X	X	X	X	X	X	X																																			
R15	-821	820K										X	X	X	X	X	X	X																																			
R16	-391	390Ω										X	X	X	X	X	X	X																																			
R17	-111	110Ω										(6)	X	X	(5)	(5)	(5)	(5)																																			
R17	-221	220Ω										X	(6)	(6)	(6)	(6)	(6)	(6)																																			
R17	5299997-431	430Ω 1/4W 2%										(6)	(6)	(6)	X	X	X	X																																			
R18	5299998-152	1.5K 1/2W 2%										X	(6)	(6)	(6)	(6)	(6)	(6)																																			
R18	5299998-222	2.2K 1/2W 2%										(6)	(6)	(6)	X	X	X	X																																			
R18	5299998-331	330Ω 1/2W 2%										(6)	X	X	(6)	(6)	(6)	(6)																																			
R19	5299997-221	220Ω 1/4W 2%										X	X	X	X	X	X	X																																			
R20	5299997-231	330Ω 1/4W 2%										X	X	X	X	X	X	X																																			
R21	058-869	RES VAR 2K 3/4W										X	X	X	X	X	X	X																																			
R22	5299997-822	8.2K 1/4W 2%										X	X	X	X	X	X	X																																			
R23	-221	220Ω										X	X	X	X	X	X	X																																			
R24	-221	220Ω										X	X	X	X	X	X	X																																			
R25	-331	330Ω										X	X	X	X	X	X	X																																			
R26	-331	330Ω										X	X	X	X	X	X	X																																			
R27	-273	27K										X	X	X	X	X	X	X																																			
R28	-192	1.8K										X	X	X	X	X	X	X																																			
R29	-102	1K										X	X	X	X	X	X	X																																			
R30	-182	1.8K										X	X	X	X	X	X	X																																			
R31	-182	1.8K										X	X	X	X	X	X	X																																			
R32	-182	1.8K										X	X	X	X	X	X	X																																			
R33	-182	1.8K										X	X	X	X	X	X	X																																			
R34	-182	1.8K										X	X	X	X	X	X	X																																			
R35	-182	1.8K										X	X	X	X	X	X	X																																			
R36	-182	1.8K										X	X	X	X	X	X	X																																			
R37	-182	1.8K										X	X	X	X	X	X	X																																			
R38	-102	1K										X	X	X	X	X	X	X																																			
R39	-121	120Ω										X	X	X	X	X	X	X																																			
R40	-470	47Ω										X	X	X	X	X	X	X																																			
R41	5299997-102	1K 1/4W 2%										X	X	X	X	X	X	X																																			
R42	048-044	2K 1/4W 1%										X	X	X	X	X	X	X																																			
R43	5299997-101	100Ω 1/4W 2%										(6)	(6)	(6)	(6)	X	(6)	X																																			
R44	5299997-911	910Ω 1/4W 2%										X	X	X	X	X	X	X																																			
R45	5299997-390	39Ω 1/4W 2%										X	X	X	X	X	X	X																																			
R46	5299997-123	12K 1/4W 2%										X	X	X	X	X	X	X																																			

LAST USED	NOT USED	DELETED
C48	——	——
C101 THRU C601	——	——
CR10	——	——
VR3	——	——
SCR2	——	——
Q13	——	——
Q101 THRU Q601	——	——
R89	——	——
R102 THRU R602	——	——
TP3,+5V,6RD,+12V,-12V	——	——
U28	——	——
JP17	——	——

INTEGRATED CIRCUITS TABLE (3)

AMPEX P/N	586-075	586-079	586-108	586-109	586-164	586-248	586-325	586-326	586-533	586-756	586-784	586-871
COMMERCIAL REF	SN 7400N	SN 7440N	SN 7474N	SN 7402N	SN 7401N	SN 7490N	SN 7405N	SN 7404N	SN 74121N	LM 309K	SN 7438N	SN 7413N
COMPONENT REF	U3,U4,U22	U16	U6,U10,U11 U15,U27	U7,U8,U13 U20,U25,U26	U2,U19	U17	U5,U9 U14,U21	U12	U18	U28	U23,U24	U1
VOLTAGE PINS	14	14	14	14	14	5	14	14	14	2	14	14
GROUND PINS	7	7	7	7	7	10	7	7	7	3	7	7

REVISIONS

LTR	ZONE	DESCRIPTION	SIGNATURE AND DATE DFTG	CHK	ENGRG
L		ECN2652-2.			
		REDRAWN NO CHANGE			
M		ECNN2825-2			

(12) TRACK TO BE CUT FOR -15 & -16 ONLY

(11) ONLY FOR -15 & -16

(10) FOR -13 THRU -16, SOC 2 P/N 5203595-01,-02,-03 & -06 ARE NOT ALLOWED.

(9) JP15 CONSIST OF 2 PTH CONNECTING J4-20 & J4-X.

(8) SEE DETAIL A ON SHEET 6 OF 6.

(7) FOR SOC 1 SEE 5203598 OR 5204161.
FOR SOC 2 SEE 5203596.
FOR SOC 3 & 4 SEE 5203575.

(6) ALL THESE COMPONENTS ARE NOT USED IN THIS DASH.

5. ALL JUMPERS ARE 615-004 EXCEPT JUMPER 12 (614-762).

4. FOR REF DWG SEE 5203817.

(3) FOR IC PIN VOLTAGE SEE TABLE ON THIS SHEET.

2. FOR B/M SEE 5203815.

1. FOR ALL COMPONENTS VALUE & P/N SEE SH 1, 2, 3 & 4.

NOTES: UNLESS OTHERWISE SPECIFIED

5203816

5203815 | IM100

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THIS DRAWING SHALL NOT BE DUPLICATED, USED FOR ANY PURPOSE OTHER THAN THAT FOR WHICH PROVIDED OR DISCLOSED IN WHOLE OR IN PART, WITHOUT THE WRITTEN CONSENT OF AMPEX CORPORATION FROM TO HOWEVER, THAT IF THIS DRAWING IS DESIGNED TO BE DELIVERED TO THE GOVERNMENT OR TO A GOVERNMENT CONTRACTOR, IT MAY BE USED BY THE GOVERNMENT OR CONTRACTOR FOR GOVERNMENT PURPOSES AS IS PROVIDED BY LAW AND REGULATIONS.

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES AND INCLUDE CHEMICALLY APPLIED OR PLATED FINISHES.
TOL ± | 2 PL | 3 PL | ANG ±
— | — | —
REMOVE BURRS AND SHARP EDGES
DRILL TOL PER ANSI 10387
INTERPRET DRAWING PER ANSI Y14.5
MATERIAL
FINISH

SIGNATURE	DATE
DRAWN BY	
CHK BY	
DFTG APVD	
ENGRG APVD	
C. TAHY	

PARTS LIST ☐

AMPEX — MEMORY PRODUCTS DIVISION, 200 N. Nash Street, El Segundo, California 90245

SCHEMATIC
TRANSPORT ELECTRONICS

SIZE	CODE IDENT NO	
D	09150	5 2 0 3 8 1 6

SCALE NONE | DO NOT SCALE THIS PRINT | SHT 1 OF 6

REF	PART NO	DESCRIPTION	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
R47	5299997-822	8.2 K 1/4W 2%										X	X	X	X	X	X	X																																			
R48	5299997-221	220 Ω 1/4W 2%										X	X	X	X	X	X	X																																			
R49	043-870	.5 Ω 10W 5%										X	X	X	X	X	X	X																																			
R50	5299997-331	330Ω 1/4W 2%										X	X	X	X	X	X	X																																			
R51	-153	15 K										X	X	X	X	X	X	X																																			
R52	-512	5.1K										X	X	X	X	X	X	X																																			
R53	-512	5.1K										X	X	X	X	X	X	X																																			
R54	-512	5.1K										X	X	X	X	X	X	X																																			
R55	-182	1.8K										X	X	X	X	X	X	X																																			
R56	-222	2.2K										X	X	X	X	X	X	X																																			
R57	-182	1.8K										X	X	X	X	X	X	X																																			
R58	-182	1.8K										X	X	X	X	X	X	X																																			
R59	5299997-682	6.8K 1/4W 2%										X	X	X	X	X	X	X																																			
R60	5299998-152	1.5 K 1/2W 2%										X	X	X	X	X	X	X																																			
R61	5299998-751	750 Ω 1/2W 2%										X	X	X	X	X	X	X																																			
R62	5299998-152	1.5 K 1/2W 2%										X	X	X	X	X	X	X																																			
R63	5299998-751	750 Ω 1/2W 2%										X	X	X	X	X	X	X																																			
R64	5299999-429	6 Ω 9W 5%										X	(6)	(6)	(6)	(6)	(6)	(6)																																			
R65	5299997-512	5.1K 1/4W 2%										X	X	X	X	X	X	X																																			
R66	-512	5.1K										X	X	X	X	X	X	X																																			
R67	-182	1.8 K										X	X	X	X	X	X	X																																			
R68	-512	5.1K										X	X	X	X	X	X	X																																			
R69	-512	5.1K										X	X	X	X	X	X	X																																			
R70	-182	1.8 K										X	X	X	X	X	X	X																																			
R71	-182	1.8K										X	X	X	X	X	X	X																																			
R72	-100	10 Ω										X	X	X	X	X	X	X																																			
R73	-361	360 Ω										X	X	X	X	X	X	X																																			
R74	5299997-101	100 Ω 1/4W 2%										(6)	(6)	(6)	(6)	X	(6)	X																																			
R75	048-044	2K 1/4W 2%										X	X	X	X	X	X	X																																			
R76	5299997-821	802 Ω 1/4W 2%										X	X	X	X	X	X	X																																			
R77	-820	82 Ω										X	X	X	X	X	X	X																																			
R78	-222	2.2 K										X	X	X	X	X	X	X																																			
R79	-102	1 K										X	X	X	X	X	X	X																																			
R80	-470	47 Ω										X	X	X	X	X	X	X																																			
R81	-121	120 Ω										X	X	X	X	X	X	X																																			
R82	5299997-123	12 K 1/4W 2%										X	X	X	X	X	X	X																																			
R83	043-870	.5 Ω 10W 5%										X	X	X	X	X	X	X																																			
R84	5299997-182	1.8K 1/4W 2%										X	X	X	X	X	X	X																																			
R85	-102	1 K										X	X	X	X	X	X	X																																			
R86	-102	1 K										X	X	X	X	X	X	X																																			
R87	-181	180 Ω										X	X	X	X	X	X	X																																			
R88	-471	470 Ω										X	X	X	X	X	X	X																																			
R89	5299997-182	1.8K 1/4W 2%										X	X	X	X	X	X	X																																			
R90	5299997-102	1 K 1/4W 2%										(6)	(6)	(6)	(6)	(6)	X	X																																			
R201	5299997-102	1 K 1/4W 2%										X	X	X	X	X	X	X																																			
R201												X	X	X	X	X	X	X																																			
R301												X	X	X	X	X	X	X																																			
R401												X	X	X	X	X	X	X																																			
R501												X	X	X	X	X	X	X																																			
R601	5299997-102	1 K 1/4W 2%										X	X	X	X	X	X	X																																			
R702	041-099	270 Ω 1W 5%										X	X	X	X	X	X	X																																			
R202												X	X	X	(6)	(6)	(6)	(6)																																			
R302												X	X	X	(6)	(6)	(6)	(6)																																			
R402												X	X	X	X	X	X	X																																			
R502												X	X	X	X	X	X	X																																			
R602	041-099	270 Ω 1W 5%										X	X	X	X	X	X	X																																			
CR1	581-157	1N4446										X	X	X	X	X	X	X																																			
CR2	581-157	1N4446										X	X	X	X	X	X	X																																			
CR3	581-157	1N4446										X	X	X	X	X	X	X																																			
CR4	013-695	1N4156										X	X	X	X	X	X	X																																			
CR5	013-678	1N4385										X	X	X	X	X	X	X																																			
CR6	013-695	1N4156										X	X	X	X	X	X	X																																			
CR7	581-157	1N4446										X	X	X	X	X	X	X																																			
CR8	581-157	1N4446										X	X	X	X	X	X	X																																			
CR9	581-157	1N4446										X	X	X	X	X	X	X																																			
CR10	581-157	1N4446										X	X	X	X	X	X	X																																			
Q1	013-354	1N965B										(6)	(6)	(6)	(6)	X	(6)	X																																			
Q2	013-354	1N965B										(6)	(6)	(6)	(6)	X	(6)	X																																			
Q3	013-202	1N825										X	X	X	X	X	X	X																																			
Q1	014-337	2N4442										(6)	(6)	(6)	(6)	X	(6)	X																																			
Q2	014-337	2N4442										(6)	(6)	(6)	(6)	X	(6)	X																																			

REVISIONS					
LTR	ZONE	DESCRIPTION	SIGNATURE AND DATE		
			DFTG	CHK	ENGRG
M		SEE SH 1			

SIZE	CODE IDENT NO	5203816
D	09150	
NEXT ASSY	NONE	SHEET 2 OF 6

5203816

5203816

REF	PART NO	DESCRIPTION	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
U1	586-871	SN7413N										X	X	X	X	X	X	X																																			
U2	↓ -164	SN7401N										X	X	X	X	X	X	X																																			
U3	-075	SN7400N										X	X	X	X	X	X	X																																			
U4	-075	SN7400N										X	X	X	X	X	X	X																																			
U5	-325	SN7405N										X	X	X	X	X	X	X																																			
U6	-108	SN7474N										X	X	X	X	X	X	X																																			
U7	-109	SN7402N										X	X	X	X	X	X	X																																			
U8	-109	SN7402N										X	X	X	X	X	X	X																																			
U9	-325	SN7405N										X	X	X	X	X	X	X																																			
U10	-108	SN7474N										X	X	X	X	X	X	X																																			
U11	-108	SN7474N										X	X	X	X	X	X	X																																			
U12	-326	SN7404N										X	X	X	X	X	X	X																																			
U13	109	SN7402N										X	X	X	X	X	X	X																																			
U14	-325	SN7405N										X	X	X	X	X	X	X																																			
U15	-108	SN7474N										X	X	X	X	X	X	X																																			
U16	-079	SN7440N										X	X	X	X	X	X	X																																			
U17	-248	SN7490N										X	X	X	X	X	X	X																																			
U18	-533	SN74121N										X	X	X	X	X	X	X																																			
U19	-164	SN7401N										X	X	X	X	X	X	X																																			
U20	-109	SN7402N										X	X	X	X	X	X	X																																			
U21	-325	SN7405N										X	X	X	X	X	X	X																																			
U22	-075	SN7400N										X	X	X	X	X	X	X																																			
U23	-784	SN7438N										X	X	X	X	X	X	X																																			
U24	-784	SN7438N										X	X	X	X	X	X	X																																			
U25	-109	SN7402N										X	X	X	X	X	X	X																																			
U26	-109	SN7402N										X	X	X	X	X	X	X																																			
U27	↑ -108	SN7474N										X	X	X	X	X	X	X																																			
U28	586-756	LM309K TO 3										X	(6)	(6)	(6)	(6)	(6)	(6)																																			
U28	589-288	LM323K TO 3										(6)	X	X	X	X	X	X																																			
Q1	5299999-257	BC107B NPN										X	X	X	X	X	X	X																																			
Q2	5299999-257	BC107B NPN										X	X	X	X	X	X	X																																			
Q3	5299999-256	BC177B PNP										X	X	X	X	X	X	X																																			
Q4	014-697	MD3251A TO 5										X	X	X	X	X	X	X																																			
Q5	014-597	CD474 TO 5										X	X	X	X	X	X	X																																			
Q6	5299999-257	BC107B NPN										X	X	X	X	X	X	X																																			
Q7	5299999-257	BC107B NPN										X	X	X	X	X	X	X																																			
Q8	5299999-256	BC177B PNP										X	X	X	X	X	X	X																																			
Q9	5299999-256	BC177B PNP										X	X	X	X	X	X	X																																			
Q10	580-465	MJ4033 TO 3 NPN										X	X	X	X	X	X	X																																			
Q11	580-466	MJ4030 TO 3 PNP										X	X	X	X	X	X	X																																			
Q12	5299999-257	BC107B NPN										X	X	X	X	X	X	X																																			
Q13	5299999-257	BC107B NPN										X	X	X	X	X	X	X																																			
Q101	014-248	2N2222 NPN										X	X	X	X	X	X	X																																			
Q201	↑	↑										X	X	X	X	X	X	X																																			
Q301												X	X	X	X	X	X	X																																			
Q401												X	X	X	X	X	X	X																																			
Q501	↓	↓										X	X	X	X	X	X	X																																			
Q601	014-248	2N2222 NPN										X	X	X	X	X	X	X																																			
TP1	173-012											X	X	X	X	X	X	X																																			
TP2	↑											X	X	X	X	X	X	X																																			
TP3												X	X	X	X	X	X	X																																			
TP4												X	X	X	X	X	X	X																																			
TP5												X	X	X	X	X	X	X																																			
TP6												X	X	X	X	X	X	X																																			
TP7	↓											X	X	X	X	X	X	X																																			
TP8	173-012											X	X	X	X	X	X	X																																			
TP+5V	173-012											X	X	X	X	X	X	X																																			
TPGRD	173-012											X	X	X	X	X	X	X																																			
TP+12V	173-012											X	X	X	X	X	X	X																																			
TP-12V	173-012											X	X	X	X	X	X	X																																			

REVISIONS					
LTR	ZONE	DESCRIPTION	SIGNATURE AND DATE		
			DFTG	CHK	ENGRG
M		SEE SH 1			

5203816

D	09150	5203815	
NONE			

REF	PART NO	DESCRIPTION	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
C1	5299999-347	.1 uF 100V										X	X	X	X	X	X	X																																		
C2	5299999-347	.1 uF 100V										X	X	X	X	X	X	X																																		
C3	5299999-347	.1 uF 100V										X	X	X	X	X	X	X																																		
C4	037 - 985	15 uF 20V										X	X	X	X	X	X	X																																		
C5	5299999-347	.1 uF 100V										X	X	X	X	X	X	X																																		
C6	037 - 985	15 uF 20V										X	X	X	X	X	X	X																																		
C7	5299999-347	.1 uF 100V										X	X	X	X	X	X	X																																		
C8												X	X	X	X	X	X	X																																		
C9												X	X	X	X	X	X	X																																		
C10												X	X	X	X	X	X	X																																		
C11												X	X	X	X	X	X	X																																		
C12												X	X	X	X	X	X	X																																		
C13												X	X	X	X	X	X	X																																		
C14	5299999-347	.1 uF 100V										X	X	X	X	X	X	X																																		
C15	037 - 985	15 uF 20V										X	X	X	X	X	X	X																																		
C16	037 - 985	15 uF 20V										X	X	X	X	X	X	X																																		
C17	034 - 950	1000 pF 100V										X	X	X	X	X	X	X																																		
C18	OPEN																																																		
C19	OPEN																																																	
C20	5299999-349	.022 uF 250V										X	X	X	X	X	X	X																																		
C21	5299999-349	.022 uF 250V										X	X	X	X	X	X	X																																		
C22	OPEN																																																	
C23	034 - 950	1000 pF 100V										X	X	X	X	X	X	X																																		
C24	5299999-347	.1 uF 100V										X	X	X	X	X	X	X																																		
C25	OPEN																																																	
C26	5299999-349	.022 uF 250V										X	X	X	X	X	X	X																																		
C27	030 - 945	1uF 50V 20%										X	X	X	X	X	X	X																																		
C28	037 - 985	15 uF 20V										X	X	X	X	X	X	X																																		
C29	037 - 985	15 uF 20V										X	X	X	X	X	X	X																																		
C30	030 - 945	1 uF 50V 20%										X	X	X	X	X	X	X																																		
C31	030 - 945	1 uF 50V 20%										X	X	X	X	X	X	X																																		
C32	5299999-349	.022 uF 250V										X	X	X	X	X	X	X																																		
C33	5299999-347	.1uF 100V										X	X	X	X	X	X	X																																		
C34	5299999-347	.1uF 100V										X	X	X	X	X	X	X																																		
C35	5299999-347	.1uF 100V										X	X	X	X	X	X	X																																		
C36	OPEN																																																	
C37	5299999-347	.1uF 100V										X	X	X	X	X	X	X																																		
C38	5299999-349	.022 uF 250V										X	X	X	X	X	X	X																																		
C39	5299999-349	.022 uF 250V										X	X	X	X	X	X	X																																		
C40	OPEN																																																	
C41	5299999-347	.1uF 100V										X	X	X	X	X	X	X																																		
C42	OPEN																																																	
C43	OPEN																																																	
C44	5299999-349	.022 uF 250V										X	X	X	X	X	X	X																																		
C45	5299999-347	.1 uF 100V										X	X	X	X	X	X	X																																		
C46	034 - 320	750 pF 300V 5%										X	X	X	X	X	X	X																																		
C101	5299999-347	.1 uF 100V										X	X	X	X	X	X	X																																		
C201												X	X	X	X	X	X	X																																		
C301												X	X	X	X	X	X	X																																		
C401												X	X	X	X	X	X	X																																		
C501												X	X	X	X	X	X	X																																		
C301	5299999-347	.1 uF 100V										X	X	X	X	X	X	X																																		
JP1	615 - 004											X	X	X	X	(6)	X	(6)																																		
JP2	OPEN																																																	
JP3	615 - 004											X	X	X	X	X	X	X																																		
JP4	615 - 004											X	X	X	X	X	X	X																																		
JP5	OPEN																																																	
JP6	615 - 004											X	X	X	X	X	X	X																																		
JP7												X	X	X	X	X	X	X																																		
JP8												X	X	X	X	(6)	X	(6)																																		
JP9												(6)	(6)	(6)	(6)	X	(6)	X																																		
JP10												X	X	X	X	X	X	X																																		
JP11	615 - 004											X	X	X	X	X	X	X																																		
JP12	614 - 762											X	X	X	X	X	X	X																																		
JP13	615-013/600-237											(6)	X	(6)	(6)	(6)	(6)	(6)																																		
R64	615-013/600-237											(6)	(6)	X	X	X	X	X																																		
JP14	615-013/600-237											(6)	(6)	X	X	X	X	X																																		
JP15	(1)											X	X	(6)	(6)	(6)	(6)	(6)																																		
JP16	615 - 004											X	X	X	X	(6)	X	(6)																																		
JP17	614 - 762											(6)	(6)	(6)	(6)	X	(6)	X																																		

REVISIONS					
LTR	ZONE	DESCRIPTION	SIGNATURE AND DATE		
			DFTG	CHK	ENGR
M		SEE SH 1			

5203816

SIZE	CODE IDENT NO	5203816
D	09150	
SCALE NONE		SHEET 4 OF 6

LTR	ZONE	DESCRIPTION	SIGNATURE AND DATE DFTG	CHK	ENGRG

10 VERSION TABLE

P/N	IPS	BPI	STROBED	REVDESKEW	R38	JP1	JP2	JP3	R42,43	R44,45	R120 THRU R920	CR6,7,102 THRU CR902	Q8,09	R5	R6	C102,104,108,110 113 THRU C902, 904,908,910,913	C106,112,116 THRU C906,912,916	C34	R41
5203310-01	45/50	556-800	YES	YES	8.2K	YES	OPEN	NO	1.8K	5.1K	10K,1W	581-157	014-364	180	47Ω	620PF,300V,5%	820PF,300V,5%	2700PF,500V,5%	10K,1W
5203310-02	45/50	200-800	YES	YES	22K	YES	OPEN	NO	1.8K	5.1K	10K,1W	581-157	014-364	180	47Ω	620PF,300V,5%	820PF,300V,5%	2700PF,500V,5%	10K,1W
5203310-03	45/50	556-800	NO	YES	8.2K	OPEN	YES	NO	1.8K	5.1K	10K,1W	581-157	014-364	5.1K	OPEN	620PF,300V,5%	820PF,300V,5%	2700PF,500V,5%	10K,1W
5203310-04	45/50	200-800	NO	YES	22K	OPEN	YES	NO	1.8K	5.1K	10K,1W	581-157	014-364	5.1K	OPEN	620PF,300V,5%	820PF,300V,5%	2700PF,500V,5%	10K,1W
5203310-05	45/50	556-800	YES	NO	8.2K	YES	OPEN	YES	OPEN	OPEN	OPEN	OPEN	OPEN	180	47Ω	620PF,300V,5%	820PF,300V,5%	2700PF,500V,5%	10K,1W
5203310-06	45/50	200-800	YES	NO	22K	YES	OPEN	YES	OPEN	OPEN	OPEN	OPEN	OPEN	180	47Ω	620PF,300V,5%	820PF,300V,5%	2700PF,500V,5%	10K,1W
5203310-07	45/50	556-800	NO	NO	8.2K	OPEN	YES	YES	OPEN	OPEN	OPEN	OPEN	OPEN	5.1K	OPEN	620PF,300V,5%	820PF,300V,5%	2700PF,500V,5%	10K,1W
5203310-08	45/50	200-800	NO	NO	22K	OPEN	YES	YES	OPEN	OPEN	OPEN	OPEN	OPEN	5.1K	OPEN	620PF,300V,5%	820PF,300V,5%	2700PF,500V,5%	10K,1W
5203310-09	45/50	800-800	NO	NO	1.8K	OPEN	YES	YES	OPEN	OPEN	OPEN	OPEN	OPEN	5.1K	OPEN	620PF,300V,5%	820PF,300V,5%	2700PF,500V,5%	OPEN
5203310-10	45/50	800-800	NO	YES	1.8K	OPEN	YES	NO	1.8K	5.1K	10K,1W	581-157	014-364	5.1K	OPEN	620PF,300V,5%	820PF,300V,5%	2700PF,500V,5%	OPEN
5203310-11	37.5	556-800	YES	YES	8.2K	YES	OPEN	NO	1.8K	5.1K	10K,1W	581-157	014-364	180	47Ω	750PF,300V,5%	1000PF,100V,5%	3300PF,300V,5%	10K,1W
5203310-12	37.5	200-800	YES	YES	22K	YES	OPEN	NO	1.8K	5.1K	10K,1W	581-157	014-364	180	47Ω	750PF,300V,5%	1000PF,100V,5%	3300PF,300V,5%	10K,1W
5203310-13	37.5	556-800	NO	YES	8.2K	OPEN	YES	NO	1.8K	5.1K	10K,1W	581-157	014-364	5.1K	OPEN	750PF,300V,5%	1000PF,100V,5%	3300PF,300V,5%	10K,1W
5203310-14	37.5	200-800	NO	YES	22K	OPEN	YES	NO	1.8K	5.1K	10K,1W	581-157	014-364	5.1K	OPEN	750PF,300V,5%	1000PF,100V,5%	3300PF,300V,5%	10K,1W
5203310-15	37.5	556-800	YES	NO	8.2K	YES	OPEN	YES	OPEN	OPEN	OPEN	OPEN	OPEN	180	47Ω	750PF,300V,5%	1000PF,100V,5%	3300PF,300V,5%	10K,1W
5203310-16	37.5	200-800	YES	NO	22K	YES	OPEN	YES	OPEN	OPEN	OPEN	OPEN	OPEN	180	47Ω	750PF,300V,5%	1000PF,100V,5%	3300PF,300V,5%	10K,1W
5203310-17	37.5	556-800	NO	NO	8.2K	OPEN	YES	YES	OPEN	OPEN	OPEN	OPEN	OPEN	5.1K	OPEN	750PF,300V,5%	1000PF,100V,5%	3300PF,300V,5%	10K,1W
5203310-18	37.5	200-800	NO	NO	22K	OPEN	YES	YES	OPEN	OPEN	OPEN	OPEN	OPEN	5.1K	OPEN	750PF,300V,5%	1000PF,100V,5%	3300PF,300V,5%	10K,1W
5203310-19	37.5	800-800	NO	NO	1.8K	OPEN	YES	YES	OPEN	OPEN	OPEN	OPEN	OPEN	5.1K	OPEN	750PF,300V,5%	1000PF,100V,5%	3300PF,300V,5%	OPEN
5203310-20	37.5	800-800	NO	YES	1.8K	OPEN	YES	NO	1.8K	5.1K	10K,1W	581-157	014-364	5.1K	OPEN	750PF,300V,5%	1000PF,100V,5%	3300PF,300V,5%	OPEN
5203310-21	24-25	556-800	YES	YES	8.2K	YES	OPEN	NO	1.8K	5.1K	10K,1W	581-157	014-364	180	47Ω	1100PF,500V,5%	1500PF,500V,5%	4700PF,300V,5%	10K,1W
5203310-22	24-25	200-800	YES	YES	22K	YES	OPEN	NO	1.8K	5.1K	10K,1W	581-157	014-364	180	47Ω	1100PF,500V,5%	1500PF,500V,5%	4700PF,300V,5%	10K,1W
5203310-23	24-25	556-800	NO	YES	8.2K	OPEN	YES	NO	1.8K	5.1K	10K,1W	581-157	014-364	5.1K	OPEN	1100PF,500V,5%	1500PF,500V,5%	4700PF,300V,5%	10K,1W
5203310-24	24-25	200-800	NO	YES	22K	OPEN	YES	NO	1.8K	5.1K	10K,1W	581-157	014-364	5.1K	OPEN	1100PF,500V,5%	1500PF,500V,5%	4700PF,300V,5%	10K,1W
5203310-25	24-25	556-800	YES	NO	8.2K	YES	OPEN	YES	OPEN	OPEN	OPEN	OPEN	OPEN	180	47Ω	1100PF,500V,5%	1500PF,500V,5%	4700PF,300V,5%	10K,1W
5203310-26	24-25	200-800	YES	NO	22K	YES	OPEN	YES	OPEN	OPEN	OPEN	OPEN	OPEN	180	47Ω	1100PF,500V,5%	1500PF,500V,5%	4700PF,300V,5%	10K,1W
5203310-27	24-25	556-800	NO	NO	8.2K	OPEN	YES	YES	OPEN	OPEN	OPEN	OPEN	OPEN	5.1K	OPEN	1100PF,500V,5%	1500PF,500V,5%	4700PF,300V,5%	10K,1W
5203310-28	24-25	200-800	NO	NO	22K	OPEN	YES	YES	OPEN	OPEN	OPEN	OPEN	OPEN	5.1K	OPEN	1100PF,500V,5%	1500PF,500V,5%	4700PF,300V,5%	10K,1W
5203310-29	24-25	800-800	NO	NO	1.8K	OPEN	YES	YES	OPEN	OPEN	OPEN	OPEN	OPEN	5.1K	OPEN	1100PF,500V,5%	1500PF,500V,5%	4700PF,300V,5%	OPEN
5203310-30	24-25	800-800	NO	YES	1.8K	OPEN	YES	NO	1.8K	5.1K	10K,1W	581-157	014-364	5.1K	OPEN	1100PF,500V,5%	1500PF,500V,5%	4700PF,300V,5%	OPEN
5203310-99					OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN
5203310-34	12.5	200-800	NO	YES	22K	OPEN	YES	NO	1.8K	5.1K	10K,1W	581-157	014-364	5.1K	OPEN	2200PF,500V,5%	3300PF,300V,5%	.01uF,250V,10%	10K,1W
5203310-35	12.5	556-800	YES	NO	8.2K	YES	OPEN	YES	OPEN	OPEN	OPEN	OPEN	OPEN	180	47Ω	2200PF,500V,5%	3300PF,300V,5%	.01uF,250V,10%	10K,1W
5203310-32	12.5	200-800	YES	YES	22K	YES	OPEN	NO	1.8K	5.1K	10K,1W	581-157	014-364	180	47Ω	2200PF,500V,5%	3300PF,300V,5%	.01uF,250V,10%	10K,1W
5203310-37	12.5	556-800	NO	NO	8.2K	OPEN	YES	YES	OPEN	OPEN	OPEN	OPEN	OPEN	5.1K	OPEN	2200PF,500V,5%	3300PF,300V,5%	.01uF,250V,10%	10K,1W
5203310-38	12.5	200-800	NO	NO	22K	OPEN	YES	YES	OPEN	OPEN	OPEN	OPEN	OPEN	5.1K	OPEN	2200PF,500V,5%	3300PF,300V,5%	.01uF,250V,10%	10K,1W
5203310-39	12.5	800-800	NO	NO	1.8K	OPEN	YES	YES	OPEN	OPEN	OPEN	OPEN	OPEN	5.1K	OPEN	2200PF,500V,5%	3300PF,300V,5%	.01uF,250V,10%	OPEN

PARTS LIST

5203310	TM100
NEXT ASSY	USED ON
APPLICATION	

NOTICE
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UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES AND INCLUDE CHEMICALLY APPLIED OR PLATED FINISHES
TOL ± | 2 PL | 3 PL | ANGLES
REMOVE BURRS AND SHARP EDGES
INTERPRET DRAWING PER ANSI Y14.5
MATERIAL
FINISH

SIGNATURE	DATE
DRAWN BY	
CHK BY	
DFTG APVD	
ENGRG APVD	
AUTH BY	

AMPEX COMPUTER PRODUCTS DIVISION Marina del Rey, California 90291

SCHEMATIC READ ELECTRONICS TM 100

SIZE	CODE IDENT NO	
D	09150	5203311
SCALE	DO NOT SCALE THIS PRINT	SHEET 1 OF 3

REVISIONS					
LTR	ZONE	DESCRIPTION	SIGNATURE AND DATE DFTG	CHK	ENGRG
		SEE SHEET ONE			

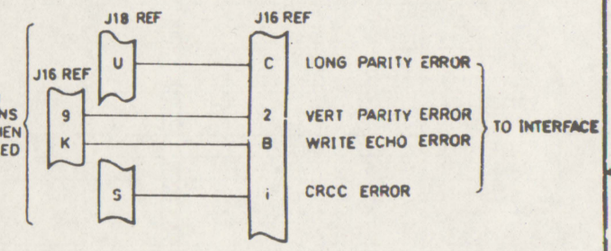
[10] VERSION TABLE

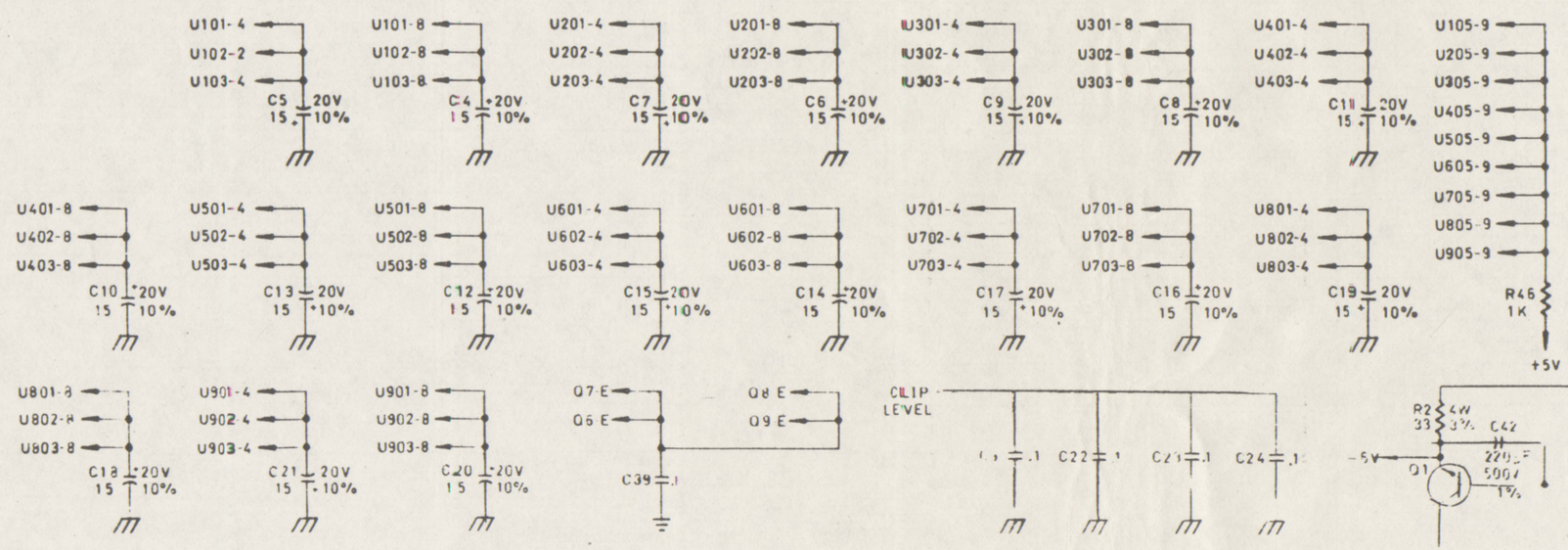
P/N	IPS	BPI	STROBED	REVDESKEW	R38	JP1	JP2	JP3	R42,43	R44,45	R120 THRU R920	CR6,7,102 THRU CR902	Q8,Q9	R5	R6	C102,104,108,110,113 THRU C902,904,908,910,913	C106,112,116 THRU C906,912,916	C34	R41
5203310-40	12.5	800-800	NO	YES	1.8K	OPEN	YES	NO	1.8K	5.1K	10K, 1W	581-157	014-364	5.1K	OPEN	2200PF, 500V, 5%	3300PF, 300V, 5%	.01μF, 250V, 10%	OPEN
5203310-63	75	556-800	NO	YES	8.2K	OPEN	YES	NO	1.8K	5.1K	10K, 1W	581-157	014-364	5.1K	OPEN	390PF, 500V, 5%	500PF, 500V, 5%	1500PF, 500V, 5%	10K, 1W
5203310-64	75	200-800	NO	YES	22K	OPEN	YES	NO	1.8K	5.1K	10K, 1W	581-157	014-364	5.1K	OPEN	390PF, 500V, 5%	500PF, 500V, 5%	1500PF, 500V, 5%	10K, 1W
5203310-67	75	556-800	NO	NO	8.2K	OPEN	YES	YES	OPEN	OPEN	OPEN	OPEN	OPEN	5.1K	OPEN	390PF, 500V, 5%	500PF, 500V, 5%	1500PF, 500V, 5%	10K, 1W
5203310-68	75	200-800	NO	NO	22K	OPEN	YES	YES	OPEN	OPEN	OPEN	OPEN	OPEN	5.1K	OPEN	390PF, 500V, 5%	500PF, 500V, 5%	1500PF, 500V, 5%	10K, 1W
5203310-69	75	800-800	NO	NO	1.8K	OPEN	YES	YES	OPEN	OPEN	OPEN	OPEN	OPEN	5.1K	OPEN	390PF, 500V, 5%	500PF, 500V, 5%	1500PF, 500V, 5%	OPEN
5203310-70	75	800-800	NO	YES	1.8K	OPEN	YES	NO	1.8K	5.1K	10K, 1W	581-157	014-364	5.1K	OPEN	390PF, 500V, 5%	500PF, 500V, 5%	1500PF, 500V, 5%	OPEN

INTEGRATED CIRCUIT LIST

AMPEX P/N	586-075	586-124	586-326	586-411	586-533	586-756	586-784	586-647
COM P/N	SN7400N	μA710C	SN7404N	MC1805P	SN74121N	LM 309K	SN7438N	SN74107N
REF DES	U3, U105 THRU U905	U101,102,103 THRU U901,902,903	U1, U2	U4	U6, U104 THRU U904	U14	U5, 9, 13	U7, 8, 10, 11, 12
GRD PIN	7	1	7	7	7	3	7	7
VCC PIN	14	8, 4	14	14	14	2	14	14

LAST USED	DELETED
R50, 122 THRU 922	
C42, 117 THRU 917	C1, 2, 40
CR8, 102 THRU 902	
TP6, 102 THRU 902	101 THRU 901
U14, 105 THRU 905	
Q9, 102 THRU 902	
VR1	
JP3	





1. ALL RESISTOR VALUES ARE IN OHMS, 1/4W, ± 2%.
2. ALL CAPACITOR VALUES ARE IN MICROFARADS 30V+80% −20%.
3. ALL DIODE ARE 581-157.
4. VR1 IS 013-983.
5. Q1 IS 014-247.
6. Q2,Q3,Q101, Q102 THRU Q901, Q902 ARE 014-248.
7. Q6,Q7 ARE 014-364.
8. Q4,Q5 ARE 014-505.
9. ALL JUMPERS ARE 614-762.

[10] SEE VERSION TABLE.

NOTES: UNLESS OTHERWISE SPECIFIED

SIZE	CODE IDENT NO	5203311
D	09150	
SCALE	NONE	SHEET 2 OF 3

REVISIONS				
LTR	ZONE	DESCRIPTION	SIGNATURE AND DATE	
N		ECN N 2507		
P		ECN N 2548 1		
R		ECN N 2711		
S		ECN N 2752		

(4) VERSION TABLE 1

	45 IPS	45-50 IPS	37.5 IPS	37.5 IPS	25 IPS	25 IPS H/P	12.5 IPS	18.75 IPS	COMMON
	-01	-05	-11	-15	-21	-25	-31	-41	-99
R107 THRU 907	100Ω	100Ω	100Ω	100Ω	82Ω	82Ω	150Ω	120Ω	OPEN
R10	18K	18K	27K	27K	39K	39K	39K	47K	OPEN
R113 THRU 913	2K	2K	2K	2K	2K	2K	2K	2K	OPEN
R115 THRU 915	22K	22K	27K	27K	27K	27K	22K	33K	OPEN
R116 THRU 916	22K	13K	27K	27K	27K	18K	22K	33K	OPEN
R114 THRU 914	27K	27K	22K	22K	22K	22K	22K	22K	OPEN
C101 THRU 901	220pF	220pF	300pF	300pF	390pF	390pF	680pF	500pF	OPEN
C109 THRU 909	560pF	560pF	390pF	390pF	820pF	820pF	1500pF	1500pF	OPEN
C104 THRU 904	.1μF	.033μF	.1μF	.022μF	.1μF	.1μF	.1μF	.1μF	OPEN
C1 THRU 9	.010μF	.010μF	.015μF	.015μF	.022μF	.022μF	.047μF	.033μF	OPEN
C107 THRU 907	33pF	33pF	47pF	47pF	82pF	82pF	620pF	100pF	OPEN
C106 THRU 906	JUMP	JUMP	JUMP	JUMP	JUMP	JUMP	JUMP	JUMP	OPEN
C111 THRU 911	33pF	33pF	47pF	47pF	82pF	82pF	100pF	100pF	OPEN
R41	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN
R42	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN
R43	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN
R44	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN
R53	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN
R111 THRU 911	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN
CR12	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN
Q1	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN
Q2	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN
Q103 THRU 903	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN

(5) INTEGRATED CIRCUIT TABLE 2

AMPEX P/N	586-075	586-109	586-549	586-581	586-756	586-784	586-797	587-478	587-249
COMMERCIAL P/N	SN7400N	SN7402N	LM1414	SN7403N	LM309K	SN7438N	SN74123N	LM318H	SN7409N
REF. DES.	U8.10.12.14.16	U6	U102 THRU 902	U7.18	U22	U19.20.21	U1 THRU 5	U101 THRU 901	U9.11.13.15.17
VOLTAGE PIN	14	14	3.10(+12V)7.14(-6V)	14	2	14	16	7(+12V) 4(-12V)	14
GROUND PIN	7	7	11	7	CASE	7	8		7

C117 THRU 917	OPEN
JP1 THRU 10	OPEN

(9) FOR -31 ONLY:
R114 THRU R914 (RES 22K) BECOME C109 THRU C909 (CAP 1500pF); C109 THRU C909 (CAP 1500pF) BECOME R114 THRU R914 (RES 22K).

8. FOR ASSY REF DWG SEE 5203517.
7. ALL RESISTOR VALUES ARE IN OHMS, 1/4W. 2%.
6. ALL CAPACITOR VALUES ARE IN MICROFARADS, 100V.
(5) FOR I.C. SEE TABLE 2.
(4) SEE VERSION TABLE 1.
3. Q1 IS OPEN.
Q2 IS OPEN.
Q3 IS 014-248.
Q4 IS 014-247.
Q101.102.104-Q901.902.904 ARE 5299999-415.
2. CR11 IS 013-188.
CR12 IS OPEN.
CR10 IS 013-599.
1. VR1 IS 013-983.

NOTES UNLESS OTHERWISE SPECIFIED

NOTE

UNLESS OTHERWISE SPECIFIED

SIGNATURE DATE

DRAWN BY

AMPEX

SCHEMATIC READ ELECTRONICS P/E

D 09150 5203516

DO NOT SCALE THIS DWG

REVISIONS					
LTR	ZONE	DESCRIPTION	SIGNATURE AND DATE DFTG	CHK	ENGRG
P		ECN N 2507			
R		ECN N 2648-2			
S		ECN N 2717/2			

COMMUN -99

P/N	DESCRIPTION
013-188	CR11
013-983	VR1
014-247	Q4
014-248	Q3
5299999-415	Q101,102,104 THRU 901,902,904
586-797	U1 THRU U5
586-109	U6
586-581	U7,18
586-075	U8,10,12,14,16
587-249	U9,11,13,15,17
586-784	U19,20,21
586-756	U22
586-478	U101 THRU 901
586-549	U102 THRU 902
059-274	R51
5299997-102	R11,13,15,17,19,21,23,25,27,29,31,101,102,105,106 THRU 901,902,905,906,30,118 THRU 918,125 THRU 925
-103	R110 THRU 910
-104	R12,14,16,18,20,22,24,26,28
-123	R47
-182	R45,46,108,109,112,117 THRU 908,909,912,917
-220	R49
5299997-271	R50

P/N	DESCRIPTION
5299997-273	R1 THRU R5
-183	R123 THRU 923
-512	R32 THRU R60,103,104,120 THRU 903,904,920
-202	R121 THRU 921
5299997-752	R119,122 THRU 919,922
5299998-391	R48
5299999-429	R52
5299997-222	R124 THRU 924
034-213	C11
5299999-250	C13,23,110,112,116 THRU 910,912,916
-347	C15 THRU C20,24,105,113,115,118,119 THRU 905,913,915,918,919
-367	C102,103,108,114 THRU 902,903,908,914
5299999-367	C10
037-985	C12,14,21,22
614-762	JP11,101 THRU 901
173-012	CH1 THRU CH9, TP1 THRU TP3, TP GRD, +5V

| DESCRIPT. | PART NUMBER | | | | |

P/N	REF DESIGNATIONS
013-257	VR2
581-157	CR1,2,3,6,101 THRU 901,102 THRU 902,103 THRU 903
013-678	CR4,5,14
013-696	CR7
013-983	VR1
014-247	Q4
014-597	Q2
(10)	JP4 OR R39
030-945	C14
034-177	C2
034-288	C1
037-990	C9,10,16
041-486	R27,R36
041-671	R26
058-753	R105 THRU 905
173-012	TP1 THRU TP5
580-465	Q1
586-124	U2
586-269	U1
586-533	U4,7,10,13,16,19,22,25,28,34.
586-756	U3
586-759	U40
586-871	U44
586-890	U43
587-510	U5,8,11,14,17,20,23,26,29,35,42.
587-533	U21,33,37
587-534	U9,27,31
587-750	U38
589-042	U6,12,15,24,30,36
587-947	U18,32,39,41 (SN74LS14)

P/N	REF DESIGNATIONS
5299997-102	R11,13,17,22,23,28,32,101 THRU 901, 102 THRU 902
-123	R12
-152	R 15
-182	R14
-221	R4,6
-222	R1,2
-241	R18 19
-271	R3,5
-331	R9,25,31
-332	R20,33,
-393	R29
-470	R10
-471	R30
-562	R24
5299997-122	R8,38
034-328	C102 THRU 902
5299999-256	Q5
-257	Q3,6
-250	C6,7,8,11,13,17 THRU 30
-362	C3,4
-364	C5
5299999-347	C15
014-581	Q101 THRU 901,102 THRU 902
5299999-416	R103 THRU 903 104 THRU 904
5299997-511	R37
5299999-338	W1 (BUS BAR)
013-934	VR4
058-844	R16
5299998-332	R7

VERSION TABLE (10)(11)

	ASSY P/N	JP4 or R39
TM 100+/TME	5204750-01	615-012 & 600-237
TM 100 (11)	5204750-02	5299999-429

REVISIONS

LTR	ZONE	DESCRIPTION	SIGNATURE AND DATE DFTG	CHK	ENGRG
A		PROTO			
B		N2661			
C		N2695-3			
D		N2820-4			

(11) FOR 5204750-02 ONLY: APPLY F.E.B. N 119.

(10) SEE VERSION TABLE.

9. ASSY P/N TO BE AS PER VERSION TABLE.
8. FOR SCHEMATIC SEE 5204751
7. JP1,2,3,5 ARE ON SOC 6.
(6) MARK PART NO. AND ISSUE LTR WITH WHITE INK PER 3124500, PARA 3.1.
5. TRIMPOTS NOT TO SUBMERGED IN WATER.
4. HEAVY LINE ON DIODE INDICATES CATHODE.
3. PLUS SIGN ON CAPACITORS INDICATES POSITIVE.
2. COMPONENT DESIGNATIONS ARE FOR REFERENCE ONLY.
1. ASSEMBLE PER AMPEX STDS.

NOTES: UNLESS OTHERWISE SPECIFIED

PARTS LIST ☒

NEXT ASSY | USED ON | APPLICATION

NOTICE
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UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES AND INCLUDE CHEMICALLY APPLIED OR PLATED FINISHES.
TOL ± | 2 PL | 3 PL | ANGLE
REMOVE BURRS AND SHARP EDGES
DRILL TOL PER AND 10.87
TOLERANCE DRAWING PER ANSI Y14.5

SIGNATURE		DATE
DRAWN BY	Mc Chan	7-8-11
CHK BY		
DFTG APVD		
ENGRG APVD		
APPR BY		

MATERIAL
FINISH

AMPEX COMPUTER PRODUCTS DIVISION Marina del Rey, California 90291

PCBA — WRITE ELECTRONICS PE/NRZ TM100-TME

SIZE	CODE IDENT NO.	
D	09150	5204752

SCALE — | DO NOT SCALE THIS PRINT | SHEET 1 OF 1

B	ERN N 2319	
C	ECN N 2407	
D	ECN N 2486	

VERSION TABLE ⓪

MODEL & SPEED	FUNCTION DESCRIPTION	ASSY PART NO.	REF. DWG.	PART A ①	B ⑧	C ⑨	D	E	F	G ⑩	H	J	K	L	M	N	P	R	S	T ⑪	U ⑫	V	W	X	Y	Z	AA ⑬	BB ⑭
TME UP TO 50 IPS WITH TXFMR 5203488-01 "OR" 5204830-01	W. SEL. SW. / W. OVERVLT. PROTECT.	5204575-01	5204577	USED	USED	USED	NONE	NONE	119-234	USED	2N 4442	330Ω, 1/4W, 2%	1N 751 A, CD 32	1N 4446	4300uF, 25V	470Ω, 2W, 5%	MR 751	43000uF, 25V	470Ω, 2W, 5%	YES	YES	22000uF, 15V, 2%	MR 751	470Ω, 2W, 5%	MR 751	15uF, 20V, 10%	48000uF, 40V	
	W/O F 1000		-02	NOT USED	NOT USED	NOT USED	NONE	NONE	JP 4	NOT USED	NONE	NONE	NONE	NONE												NONE		
	W. F 1000 SEL. SW.		-03	USED	USED	USED	NONE	NONE	119-234	USED	NONE	NONE	NONE	NONE												NONE		
	W/O F 1000 D. CH.		-04	NOT USED	NOT USED	NOT USED	SN 7438 N	5.1KΩ, 1/4W, 2%	119-234	NOT USED	NONE	NONE	NONE	NONE												NONE		
	W. F 1000 / W. OVERVLT. PROTECT.		-05	USED	USED	USED	NONE	NONE	JP 4	USED	2N 4442	330Ω, 1/4W, 2%	1N 751 A, CD 32	1N 4446												15uF, 20V, 10%		
	W/O F 1000 / W. OVERVLT. PROTECT.		-06	NOT USED	NOT USED	NOT USED	NONE	NONE	JP 4	NOT USED	2N 4442	330Ω, 1/4W, 2%	1N 751 A, CD 32	1N 4446												15uF, 20V, 10%		
	W. F 1000		-07	USED	USED	USED	NONE	NONE	JP 4	USED	NONE	NONE	NONE	NONE												NONE		
	W/O F 1000 D.CH/W.OVERVLT. PROT.	5204575-08	5204577	NOT USED	NOT USED	NOT USED	SN 7438 N	5.1KΩ, 1/4W, 2%	119-234	NOT USED	2N 4442	330Ω, 1/4W, 2%	1N 751 A, CD 32	1N 4446	4300uF, 25V	470Ω, 2W, 5%	MR 751	43000uF, 25V	470Ω, 2W, 5%	YES	YES	22000uF, 15V, 2%	MR 751	470Ω, 2W, 5%	MR 751	15uF, 20V, 10%	48000uF, 40V	
TM 100+ TXFMR 5203488-01	W. F 1000	5204180-01	5204182	USED	USED	USED	NONE	NONE	JP 4	USED	NONE	NONE	NONE	NONE	4300uF, 25V	470Ω, 2W, 5%	MR 751	43000uF, 25V	470Ω, 2W, 5%	YES	YES	NONE	NONE	NONE	NONE	NONE	48000uF, 40V	
	W/O F 1000		-02	NOT USED	NOT USED	NOT USED	NONE	NONE	JP 4	NOT USED																		
	W/F 1000 & SELECT SWITCH		-03	USED	USED	USED	NONE	NONE	119-234	USED																		
	W/O F 1000 FULL DAISY CHAIN		-04	NOT USED	NOT USED	NOT USED	SN 7438 N	5.1KΩ, 1/4W, 2%	119-234	NOT USED												NONE		NONE	NONE			
TM 100+ TXFMR 5204746-01	W. F 1000		-05	USED	USED	USED	NONE	NONE	JP 4	USED												22000uF, 15V, 2%		470Ω, 2W, 5%	MR 751			
	W/O F 1000		-06	NOT USED	NOT USED	NOT USED	NONE	NONE	JP 4	NOT USED																		
	W/F 1000 & SELECT SWITCH		-07	USED	USED	USED	NONE	NONE	119-234	USED																		
	W/O F1000 FULL DAISY CHAIN	5204180-08	5204182	NOT USED	NOT USED	NOT USED	SN 7438 N	5.1KΩ, 1/4W, 2%	119-234	NOT USED	NONE	NONE	NONE	NONE	4300uF, 25V	470Ω, 2W, 5%	MR 751	43000uF, 25V	470Ω, 2W, 5%	YES	YES	22000uF, 15V, 25V	NONE	470Ω, 2W, 5%	MR 751	NONE	48000uF, 40V	
TME LO/HI SPEED TXFMR 5204831-01	W. SEL. SW. W. OVERVOLT. PROTECT	5204875-01	5204877	USED	USED	USED	NONE	NONE	119-234	USED	2N 4442	330Ω, 1/4W, 2%	1N 751 A, CD 32	1N 4446	15600uF, 25V	39 KΩ, 2W, 5%	NONE	15600uF, 25V	39 KΩ, 2W, 5%	YES	YES	22000uF, 15V, 25V	MR 751	470Ω, 2W, 5%	MR 751	15uF, 20V, 10%	48000uF, 40V	
	W/O F 1000		-02	NOT USED	NOT USED	NOT USED	NONE	NONE	JP 4	NOT USED	NONE	NONE	NONE	NONE												NONE		
	W/F 1000 SEL. SW.		-03	USED	USED	USED	NONE	NONE	119-234	USED	NONE	NONE	NONE	NONE												NONE		
	W/O F 1000 D.CH.		-04	NOT USED	NOT USED	NOT USED	SN 7438 N	5.1KΩ, 1/4W, 2%	119-234	NOT USED	NONE	NONE	NONE	NONE												NONE		
	W. F 1000 / W. OVERVLT. PROTECT		-05	USED	USED	USED	NONE	NONE	JP 4	USED	2N 4442	330Ω, 1/4W, 2%	1N 751 A, CD 32	1N 4446												15uF, 20V, 10%		
	W/O F 1000 / W. OVERVLT. PROTECT		-06	NOT USED	NOT USED	NOT USED	NONE	NONE	JP 4	NOT USED	2N 4442	330Ω, 1/4W, 2%	1N 751 A, CD 32	1N 4446												15uF, 20V, 10%		
	W/F 1000		-07	USED	USED	USED	NONE	NONE	JP 4	USED	NONE	NONE	NONE	NONE												NONE		
	W/O F 1000 D.CH/W.OVERVLT. PROT.	5204875-08	5204877	NOT USED	NOT USED	NOT USED	SN 7438 N	5.1KΩ, 1/4W, 2%	119-234	NOT USED	2N 4442	330Ω, 1/4W, 2%	1N 751 A, CD 32	1N 4446	15600uF, 25V	39 KΩ, 2W, 5%	NONE	15600uF, 25V	39 KΩ, 2W, 5%	YES	YES	22000uF, 15V, 25V	MR 751	470Ω, 2W, 5%	MR 751	15uF, 20V, 10%	48000uF, 40V	

LAST USED	NOT USED	DELETE
U2		
C6		
R11		
SCR 1		
CR 2		
VR 1		
JP 8		
TB 2		
P30	P2,3,5,7,8,9,11,14,17	
J34	J1 THRU J33 & TH-35	
S7		
~~BB~~		
PART BB		

DESGN.	CMPT. REF.
PART D	U1
E	R5
F	S1 OR JP4
H	SCR 1
J	R 11
K	VR 1
L	CR1 THRU CR20
M	TB 2
P	P2
R	J1 THRU J33 & TH-35
S	S7
T	C1
U	R1
V	C5
W	CR1 THRU CR20

ASSY PART NO.	JUMPER						
	"a" to "b"	"h" to "z"	"m" to "n"	"x" to "y"	"bb" to "cc"	"dd" to "ee"	JP 8
5204575-01 THRU-08	YES	YES	YES	YES	YES	YES	NO
5204180-01 THRU-08	YES	YES	YES	YES	YES	YES	NO
5204875-01 THRU-08	YES	YES	YES	YES	YES	YES	NO

AMPEX

SCHEMATIC